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ABSTRACT

This third volume, one of the products in the Nursing Curriculum Project series "Pathways to Practice", presents the results of an extended examination of three social elements that impinge directly upon the nursing profession: feminism, higher education, and health care. These elements are fully discussed in separate papers (presented as chapters): (1) Feminism and Nursing: How the Ethos Defines a System, (2) Higher Education: Trends and Tenors, and (3) The Changing Health Care System: Nursing's Immediate Environment. Other major topics cover basic assumptions about the environments of nursing, emerging themes from these environments, and a description of the Nursing Curriculum Project. Selected references and a roster of members of the project seminar are appended. (HD)

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A Workbook on the Environments of Nursing

Theoretical Framework, Part I

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PATHWAYS TO PRACTICE, Vol. 3

Nursing Curriculum Project

SOUTHERN REGIONAL EDUCATION BOARD
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Preface

This third volume in the series *Pathways to Practice* is the first of two publications in which the Nursing Curriculum Project's theoretical framework is delineated. In this book, we present the results of an extended examination of three social elements that impinge so directly upon nursing that they can be said to contribute fundamentally to its course in history. The next volume will deal directly with nursing itself.

The project sought first to explore the "environments" (as we have called them) because we believed that awareness of the trends in feminism, higher education, and health care, and the development of some acuity as to where these trends might be leading us, would be essential to building an intelligent and useful theoretical framework for nursing curricula. (For a thorough discussion of just what a "theoretical framework" is and how it relates to the development of nursing curricula, see the section on project methodology in the Introduction, below.)

We have called this a "workbook" because we wished the reader to know that these explorations of three massive and constantly changing arenas are not definitive—nor could they be. The preparation of these three papers was an exercise designed to allow both staff and seminar members to learn as much as possible by becoming immersed in the issues and sensitive to their many ramifications. Workbooks are like diaries or journals—they cannot be completed in the way novels can, for novels create their own finite worlds. Workbooks and journals, which reflect the ongoing nature of an unruly and unencompassable world, can stop but never really be finished. In fact, we learned that writing a workbook can be very frustrating: whenever we stopped to have others read a current draft, the passage of only a few weeks would always bring new facts and new ideas that would force us back to our typewriters for more revision.

When a book is written by a number of people, the labor has to be divided according to some plan. Since the staff numbered three and since the environments we had chosen also were three, each of us took the responsibility for doing the research and the writing of the successive drafts on one of the environments. Patricia Haase undertook the research and wrote the drafts for the chapter on feminism. Mary Howard Smith brought her extensive experience with the Southern Regional Education Board (SREB) to bear on the subject of higher education, searching through the voluminous material now appearing in the subject to write the chapter summarizing the recent trends here that are relevant to nursing education's special needs. Barbara Reitt

sampled the literature in health care systems and the future of American health care to compose the numerous drafts this chapter passed through.

As each draft for each chapter was completed, it was submitted not only to various consultants for their criticism, but to members of the project seminar as well. Our guess is that nearly one hundred persons have reviewed one or more chapters one or more times. This process of writing and review, repeated many times, has produced what we hope is a highly refined piece of work; our expectation was that the combination of sound research with review by experts in many fields would enable us to provide our readers information about ongoing trends in complex subjects that would be reasonably accurate and genuinely helpful to persons who bear the responsibility of planning for a real world in a real future.

We have ended our labors over our "workbook" with a mixture of regret and—we admit it—relief, but satisfied that the exercise has prepared the foundation for our next publication, in which the framework for nursing curricula itself will be presented.

We owe much to the large number of people who have helped us with the many revisions of this volume. Some, who are named in the rosters at the end of the book, have made their contributions through their formal association with the project. Many others, colleagues and friends who are not officially or directly associated with us, have generously contributed time and effort on our behalf. We thank them all for catching our errors of commission and omission (any that remain are our responsibility) and for giving us suggestions that have proven very helpful, sometimes downright inspiring. It is in this sense, too, that this is a "workbook"—the fruit of the efforts of a large number of people.

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Contents

Introduction: The Nursing Curriculum Project 1

The Environments of Nursing: Basic Assumptions 7

1. Feminism and Nursing: How the Ethos Defines a System 15

2. Higher Education: Trends and Tenors 37

3. The Changing Health Care System: Nursing's Immediate Environment 71

Emerging Themes 106

Selected References

A. Feminism and Nursing 114

B. Higher Education 116

C. The Health Care System 121

Rosters 124

Introduction: The Nursing Curriculum Project

In October 1972, the Nursing Curriculum Project of the Southern Regional Education Board (SREB) was begun pursuant to the wishes of the members of the SREB Nursing Council. The specific purpose of the project is to describe and differentiate the types of nursing personnel needed for the future (conclusions that are based on an assessment of the needs of Southerners for health services that can best be provided by nurses) and to propose ways in which these nurses can best be educated. The specific aims of the project are: (1) to develop a set of assumptions about present and predicted health care needs; (2) to propose categories of nursing personnel to provide the full range of nursing services implied in the assumptions; and (3) to propose a broad scheme or blueprint for nursing education showing how the types of nurses suggested can be prepared within the educational system.

METHODOLOGY OF THE PROJECT

Using the project proposal as a guide, the staff decided to follow the traditional methodology for developing nursing curricula, a primary step of which is the identification of a set of assumptions known as a theoretical framework. These assumptions usually represent the collective thinking of a single faculty about the nature of nursing practice, of the roles for which nurses are to be prepared, of the students as learners, and of the educational institutions of which nursing is a part (Harms, 1969). For a regional planning group, the theoretical framework needs a broader base encompassing, in addition, assumptions about the future directions of the health care system of which nursing is a part, the changing status of women in society, and the educational settings in which different nursing programs function. From this set of assumptions based on theoretical considerations and statistical data, conclusions can be determined regarding: (1) the kinds of nurse workers needed; (2) the competencies required by each, including a taxonomy of behaviors differentiating workers; and (3) a body of knowledge optimal for fostering the acquisition of the identified behaviors.

Unfortunately, educators disagree about what constitutes a framework for a curriculum. Some use the term to describe not only assumptions but also relevant theory. Others define it as a process, and still others as a philosophy that specifies concepts to be taught and the interrelationships between those concepts (Dunlap, 1972).

The 1972 revision of the National League for Nursing (NLN) Criteria for the Accreditation of Baccalaureate and Higher Degree Programs requires a curriculum plan to be based on a "conceptual framework

consistent with the stated philosophy, purposes, and objectives of the program." The meaning of *conceptual* in this sense, is based on the definition of the word *concept* as used in theory construction, and can be construed to intend, according to Hodgman (1973), "a basic structure in which a complex of ideas are unified so as to portray" a larger general notion. Examples might be: adaptation, aggression, alienation, leisure, poverty, stress, system maintenance, or tissue integrity. An entire curriculum might be focused on life processes or the concepts inherent therein, or several more unrelated concepts might be chosen to guide the selection of content. The NLN requirement is an example of the use of the phrase *conceptual framework* that includes a philosophy specifying concepts to be taught and the interrelationships between those concepts. The philosophy, on the other hand, is a set of beliefs or assumptions modified by and based in part on relevant theory.

A regional curricular group can evolve a set of assumptions based on theory in good conscience, but individual schools and programs must select the theory and specific concepts required for their own respective efforts in curriculum design.

For the purposes of the Nursing Curriculum Project, the theoretical framework is defined as a set of assumptions representing the collective thinking of a number of persons regarding the nature of nursing practice within the health care system, of the roles for which nurses are to be prepared, of the students as persons, and of the educational institutions of which nursing is a part. The framework may be likened to an empty garage for mass parking, as it were; like buildings that temporarily house automobiles, it provides a structure for the changing aspects of the curriculum. Changes may be made in the day-to-day instructional plan or course outline, based on scientific or technological advances, but the overall purpose and direction for teaching remains constant. Changes may be made in a course, or in the sequence of courses, or in the strategies for teaching the courses, but the beliefs and purposes, the assumptions encased in the theoretical framework, remain the same.

The project proposal espouses the idea that nursing curricula ought to be based on the health care needs of the people. After much thought and consultation, the staff elected an inductive rather than a deductive approach to such a determination. It was decided that further collection of data would merely reflect the existing structure and not predict the future directions of a rapidly changing health care system. *Nursing Education in the South, 1973*, a fact book based on the initial findings, was published in the early spring of 1974. The data support the view that the nation has too many educational programs and not enough

nurses with expertise for practice, education, and research. Further assumptions about the future of the health care delivery system, the system of higher education, and the changing social scene have been taken from a literature that is growing larger and more comprehensive each day.

SEMINARS

After wide consultation, thirty-six seminar members were appointed in the fall and winter of 1972–73 to serve as the working group for the project. Members were drawn from each of the fourteen states in the SREB region. Representation was secured from both nursing practice and education. The seminar also had representation from medicine, hospital and university administration, and vocational training programs. A list of members and their respective titles is to be found in the final section of this book.

In inviting persons to participate in the seminar, the project director made clear the extent of commitment that would be required: attendance at week-long sessions three times a year for two and a half years, with the probability of intersession assignments. There has been very little attrition in the roster.

The first seminar session was the beginning step in the development of a set of assumptions concerning a theoretical framework for a nursing curriculum. Seminar members were convened in Atlanta March 5–9, 1973. The conference was largely informational, addressed to the issues already identified as pertinent to the construction of a curricular framework. Participants were then asked to write position papers on the future of nursing: how they desired nursing to evolve if there were no constraints upon its growth. The project's second publication, *To Serve the Future Hour*, is an anthology of essays on the future of nursing that grew out of this first conference.

Following the conference the staff attempted to derive assumptions applicable to the theoretical framework from the literature and from position papers submitted by seminar participants. Assumptions concerning the future health care system and a philosophical commitment to the place of nursing in that context were prepared for seminar deliberation.

The second seminar was held in Savannah June 11–15, 1973. At this time the projections of the health care system and statements on the role and scope of nursing practice were discussed, modified, and approved. The beginning of a taxonomy of nursing competencies was also presented for consideration.

In the third seminar session, held October 15–19, 1973 in New

Orleans, the members gave final approval to a set of basic assumptions to be used in the curricular framework. They also developed further the taxonomy of nursing competencies and began deliberation of kinds of nursing workers needed for the coming decades.

A fourth seminar was held in Atlanta in February 4–7, 1974. At this session the schematics for the taxonomy were completed, conclusions were reached about kinds and levels of nursing workers, and the process was begun of fitting together the competencies and workers as they would interact in the health care system.

The fifth seminar was held in Palm Beach Shores May 27–30, 1974. At this session the seminar members completed the correlation of the competencies with levels of workers needed in the evolving health care system. Final recommendations regarding a system of nursing education to provide orderly and complemental learning opportunities were reviewed.

ADVISORY AND PLANNING COMMITTEES

An ad hoc advisory panel was convened in December 1972 to assist with the selection of seminar members. The groups also gave approval to the initial planning for the first seminar session held in Atlanta on March 5–9. (A list of members of this committee is provided in the final section of this book.)

At the close of the second seminar session, the staff perceived the need for a planning committee composed of selected seminar members whose function would be to facilitate feedback from the members concerning the general direction of the project and to assist in working out details for seminar sessions and interim assignments. A planning committee of six was appointed after solicitation of nominations from the full membership. (Planning committee members are indicated by asterisks on the seminar roster in the final section of the book.)

To guide the remaining tasks of recommendation, demonstration, and dissemination, the project needed an advisory group composed principally of persons who are not nurses but who are in one way or another influential in shaping nursing education in the South. To meet this need, SREB appointed an eight-member advisory committee representing pertinent sectors of higher education and the lay public. This group was convened for the first time in the summer of 1974 and will meet twice more during the life of the project. (Advisory committee members are listed below, in the final section.)

Professional consultants have been and will be selected to assess and review all phases of the project which involve products. Some of these professionals have been asked to evaluate not only this narrative con-

cerning the conceptual framework, but also the assumptions derived from such theoretical formulations. The opinions of consultants in several relevant areas of expertise—health care planning, medicine, nursing practice, nursing education—have been and will be sought. The criticism and valuable assistance of these consultants is gratefully acknowledged by the project staff and its seminar members.

EXPECTED OUTCOMES

In 1971, the National Commission for Study of Nursing and Nursing Education recommended that regional or inter-institutional groups be established for the study and development of nursing curricula. These studies were to be similar to previous national studies in the biological, physical, and social sciences, except that the above-named projects, prompted by widespread alarm to the launching of Sputnik I, had a clear objective: to improve student achievement nationally. Scholars were given the decision-making power to plan national curricula for use in the public school system. Moreover, these projects were funded on an exceptionally large scale. One hundred million dollars was spent for science and mathematics, and the fifty projects in the social sciences, including an educational laboratory, were costing three million a year in 1971 (Eisner, 1971).

The objective of the Southern Nursing Curriculum Project—a regional reconceptualization of the system for educating nurses—is less specific and less achievement-oriented. Time was needed to re-examine the assumptions underlying nursing practice, as it exists now, and as it will exist, in the context of rapidly changing values and structures in both health care and higher education. Moreover, it appears unsound to consider modifying the existing educational process without examining the practice arena, as each system lives in a symbiotic relationship with the other.

Both regionally and nationally SREB's Nursing Curriculum Project is generating interest among those concerned about the contribution of nursing education to health care. Following on the heels of the recent report of the National Commission on Nursing and Nursing Education, the project operates in a climate favorable to change. Originally conceived by the SREB Council on Collegiate Education for Nursing, the project has the further advantage of the Council's twelve-year impact on nursing education in the South. There are cogent reasons therefore, to predict that project recommendations will be accorded serious attention and that many of them will eventually become incorporated into the structure of nursing's educational enterprise.

Even partial adoption will take time, of course, as anyone knows who

is familiar with the workings of educational change. In the year or two immediately following the project, we can expect to hear its recommendations quoted and discussed, and to see some of them implemented here and there in the schools of the region. The pace of change in the health care system will serve to expedite and expand implementation. The South can lead in bringing about a cohesive system of nursing education, a system that will realize the full spectrum of nursing's potential for advancing the health care of the nation.

The Environments of Nursing: Basic Assumptions

The three working papers making up the main body of this book are united in a number of ways that might not be immediately apparent to the reader. Disparate as the three subjects might seem, our examination of trends in feminism, higher education, and the health care system are based on common assumptions. An understanding of what these premises are will help the reader see not only why these three subjects were chosen for such close scrutiny but also to see how the common themes, which are discussed in the final chapter, emerged.

HOW CAN YOU STUDY NURSING BY LOOKING AT SOMETHING ELSE?

The question has been posed to us in many different forms, and often. We have been asked why we have spent so much time studying the "background" of nursing; it is "just background," after all. Aren't we spending too much time reinventing the wheel, as it were? Some have been puzzled by our preoccupation with the obvious: shouldn't we spend less time on areas that "everybody knows" are "connected" with nursing and "get down to brass tacks" instead? Others protest what they think is an unscientific approach: shouldn't we isolate the object of our study and then examine it directly and thoroughly? Would a laboratory researcher study the loblolly pine by analyzing first the soil it grows in?

Obviously a study of the soil alone will not endow the researcher with an understanding of the loblolly pine, but a failure to study the soil will prevent his achieving complete knowledge of the tree. Likewise, our examination of such environments of nursing as feminism, higher education, and the health care system is no substitute for a study of nursing itself, but failure to examine such essential elements in the "soil" in which nursing grows would mean that our theoretical framework would be incomplete. This is probably the most important premise the project has adopted.

It is obvious that nursing, being traditionally a woman's occupation, is "connected" somehow with feminism. And that nursing is "connected" with higher education, as many nurses are educated in institutions of higher education. Finally, as a health service, nursing is "connected" with the whole health service system. But what does "connected" mean? Such vague terms are not useful, however obvious the truisms they express may be.

The essential question that needs to be answered is: how is nursing connected with this, that, or the other element in society? How does feminism affect nursing? Does nursing affect feminism? How? How do higher edu-

cation and nursing affect each other? In what sense is nursing a part of the health care system? Is it or is it not wholly contained within the system?

Careful attention to these and similar questions brings to the fore a conception of nursing that will remind readers of the many ecologically oriented discussions of the natural and the social world that one can read in the current literature. Like biological ecologists and other scholars using similar viewpoints and methods, we have assumed that nursing, like everything else, exists in a context made up of many environments and that these environments all contribute to the creation of an "identity" for nursing. Together, they all make nursing what it is. To understand completely what is happening in nursing, one must understand what is happening in these environments.

The same idea can be expressed another way. Nursing would be utterly different (1) if it had not always been a woman's but a man's occupation, (2) if no nursing programs were located in institutions of higher education, or (3) if nursing were not a provider of health services to society. We assume that basic changes in any one of these three environments would cause a basic change in nursing and that in picking these three environments we have selected three of the defining *environments of nursing.*

Or, to return to our first analogy, we are assuming that in a different environment, a loblolly pine would cease to be a loblolly pine; it would be either a dead one or a mutated one.

In other words, nursing is a product of its social environment. Such an assertion does not rob nursing of its integrity as a separate and viable entity, any more than our understanding of the tree as a product of its environment makes it any less a tree, a viable specimen of a recognizable species. In fact, it can be soundly argued that anything, whether it is a natural or a social object, cannot be seen in its fullest integrity and viability except as it is seen in interaction with its environment.

Dissection, for all its usefulness, requires that the object that is to be studied be killed first. The knowledge gained by such study is valid but incomplete. It yields few insights about living processes. The kind of approach we have adopted is a complementary and contrasting one to the well-established methods of analysis, dissection, and the study of parts in isolation. Rather than "thinking a world to pieces," we are "thinking a world together." To put it in more sophisticated terms, we are assuming that the world "out there" can and should be perceived holistically.

WHAT ARE NURSING'S ENVIRONMENTS?

Assuming, then, that a social entity like nursing cannot be fully known until its defining environments are understood, how does one go about identifying such environments?

One of the most difficult problems is knowing what to exclude. In perceiving an interrelated reality holistically, one is in danger of being too inclusive, since just about anything can be shown to be at least indirectly or distantly related to anything else. One needs to whittle the problem down to manageable, reasonable size.

To do so, one needs to devise a good definition of what an environment is. The three environments we have chosen to examine are very different from each other, and it might appear that we have had no good operating definition for "environment" when we made our choices. Feminism, which is a social movement and an attitude held by individuals, is quite a different sort of thing than higher education and the health system, which are loosely interconnected systems of institutions, organizations, and individuals. Despite these differences, we have treated the three alike.

It's not that the project can't tell apples from pears; it's that we are working from the knowledge that "fruit" is a larger and more inclusive but equally legitimate category.

Most of us are in the habit of thinking of environments as places. We think of ourselves as living in both our social and our natural environments. The fish lives in its environment, the sea. Likewise, we tend to think of nursing as existing in an immediate environment, the health system, which in turn is in a larger environment, society. Nursing obviously is not in feminism, nor is it in higher education. So how can they be considered environments of nursing?

In defining "environment," we avoided thinking of places or things that have location and dimension. Likewise, we avoided thinking of the relationship between the environment and its object as a geographical or dimensional one, as one thing outside and surrounding another, or as one thing that is bigger than the other. We discovered that this sort of conception of environment could be very misleading.

Instead, we developed a definition of environments as happenings, occurrences, or processes. The greatest difficulty of course is that it is hard to devise a mental image of a process.

Environments are forces or conditions that, working alone and together, can create their objects or make them possible, can change their objects, or can destroy or kill them. Put most simply, an environment is anything that influences something else. (*For this definition of environment, we are indebted to the work of Noel McInnis in his booklet* You Are An Environment: Teaching/Learning Environmental Attitudes, *published by the Center for Curriculum Design, Evanston, Illinois, in 1972.*) *Obviously, the thing that does the influencing does not have to be bigger than the thing it influences, nor does it need to contain it—or even be physically near it.*

Taking this approach, then, we have made a number of corollary assumptions:

1. Because so many individuals, institutions, systems, and events influence nursing, we cannot say that there is just one environment of nursing. Nursing has many environments.

2. Because for all practical purposes there are too many nursing environments to study (for instance, by our definition it can be said that each and every nurse is an environment of nursing; those who emerge as leaders can clearly be very important environments), we had to work out a rationale for selecting some environments over others. We have assumed that environments can be evaluated as to their relative importance.

3. The three we selected emerged as most important for two reasons. First, each seemed to exert, in comparison with other environments, the most constant influence on nursing. Second, each seemed to have been doing so, and seemed likely to continue doing so, for a long time. In short, the influence of the most important environments was seen to be strong and permanent. We could think of no better way to determine what a defining *environment is.*

WHAT KIND OF INFLUENCE DOES AN ENVIRONMENT WIELD?

We started by agreeing that, for example, feminism has "something to do with" nursing. We improved this a little by saying that feminism "influences" nursing and that the influence is strong and permanent. But we have yet to describe how the influence works.

We have assumed that social environments affect their objects in ways that are analogous to the ways that environments in the biological realm affect their objects.

Environments can be positive *or* creative. *That is, their force, alone or collectively, can either allow for the coming into existence of the object or even directly create the object. The seed of the loblolly pine will lie dormant in the soil until conditions are just right; then, when the proper humidity, temperature, and the essential nutrients are all present, the seed will begin to germinate.*

Environments can cause an ongoing process to change. *A germinating seed pushing up through the soil may meet an obstacle that forces it to grow around it if it cannot grow through it. The consequence is a changed shape in the adult plant.*

Finally, environments can have a negative *or* destructive *effect on their objects. The germinating seed may encounter an environment that halts the germination: too much moisture or too little, too high or too low a temperature and that particular loblolly pine will cease to be. If the killing condition persists and is widespread, all loblolly pines may go out of existence.*

Thus, as we have examined the environments of nursing, we have tried to keep in mind the three kinds of effects they may have on nursing. It is a simple sort of approach, but it nonetheless yields insights that can be very interesting. We have assumed that feminism, higher education, and the health system all have the power to influence nursing in creative, altering, and destructive ways. From the point of view of anyone concerned with the improvement of nursing, it is clear that such an approach can be helpful as it increases awareness of the influences one would want to encourage and of the influences one would need to prevent or circumvent. It is an approach conducive to a method of planning that is both creative and defensive.

The ecologist has some special methodological problems. The worst one, probably, is that he has so much trouble getting a grip on the object he is studying. As long as it is still alive and interacting with its environment, it is difficult if not downright impossible to analyze fully. We certainly had difficulty getting a firm grip on our subjects: they refused to sit still! No sooner did we begin to grasp the current picture in one of these three environments when a new development would come to our attention, one that would completely alter the situation. We did not solve this problem any better than anyone else who has tried to examine ongoing interrelations between complex entities. We tried to remain undeterred by the problem, assuming that although we would fall far short of an ideal or completely holistic understanding, any other approach would be far worse. Holistic insights aren't easy to obtain and to hold onto; we tried to offset the problem as best we could by reminding ourselves and our readers that anything we look at is in the process of changing as we gaze at it. When one assumes that change is constant, one's descriptions of what one sees are invalidated by the mere passage of time. As long as that is understood, there is nothing to lose by working out such descriptions, and everything to gain if the exercise, like practice, makes holistic perception more nearly perfect.

After all, we are trying to look intelligently at a reality that is so complex that it appears to be disorderly, so complex that attempts to bring it into simplified order are bound to be distortions. The simplifications we have used, when we've used them, are heuristic, in other words. By the same token, conclusions and predictions we make are necessarily tentative and incomplete. We nonetheless assume that they have value for the planner.

IS NURSING AN ENVIRONMENT?

One final point needs to be made about the nature of "influence," as we have understood it. Influence between environments and their objects is reciprocal. *Every environment has environments; everything is an environment.*

An explanation of the reciprocal nature of environmental influence pro-

vides the most satisfactory reply to those who object to the ecological or interactive approach because they feel it robs things of their integrity or identity. Such objections are most strenuous when the approach is applied to the study of human beings, especially to the study of individual persons. Such critics have overlooked the fact that such study assumes that if people are acted upon, they also act. If I am the product of my environment, then my environment is just as much my product. We create each other, over and over, in a continuously interactive manner.

Likewise, nursing is not something we have thought of as passive and constantly acted upon but never acting. Rather, we have assumed that nursing is an environment of many other things.

Obviously, it is a very important environment of every nurse. It is a crucial environment of many a client. It is one of the environments of all the people working in the health care system. Nursing, we have assumed, is one of feminism's most important environments. Think about it for a minute: nurses and teachers have probably done more to define the "working woman" in people's minds than anyone else! A close look at the history of higher education reveals numerous examples of ways that nursing has altered the face of higher education.

In other words, while examining the "soil" that nursing grows in, we have tried to keep sight of the fact that nursing is one of the environments of its environments, sometimes a defining *environment. The relation between nursing and these environments is a continuously reciprocating sort of behavior, such action causing reactions that, in turn, are actions that call forth still other reactions. Familiar analogies to this sort of behavior include the thermostat (where the goal is a steady state, a given temperature) and the computer (where goals can be both various and complex). The model of the computer provides some of the most useful guidelines for thinking about social entities such as nursing, better often than the biological world and its loblolly pine can, even when it is described in terms of its relation to its environments. One reason the cybernetic approach turns out to be more useful is that it affords the means for working with greater complexity of interaction between things that are not, after all, living organisms, but systems of living organisms. An extended analogy between the loblolly pine and nursing would break down after a while; nursing would be too complex in too many ways that have no parallel in a living plant.*

However, whether one works the somewhat limited but more familiar and concrete examples that can be gleaned from ecological biology—and that is a very good place to start—or whether one is more comfortable and more satisfied with the abstract and less familiar models provided by cybernetics and systems theory, it is crucial for the purposes of this project to remember: the basic premise underlying the entire theoretical framework for nursing

curricula is that the future of nursing can be planned for only as well as one has accurately anticipated the future of nursing's environments. The perception of either one illuminates the perception of the other.

It is a sobering thought: many factors affect the decisions of curriculum planners, and many are the consequences of their plans.

WORKING PAPER ONE

Feminism and Nursing: How the Ethos Defines a System

> Young women, . . . you are, in my opinion, disgracefully ignorant. You have never made a discovery of any importance. You have never shaken an empire or led an army into battle. The plays of Shakespeare are not by you, and you have never introduced a barbarous race to the blessings of civilization. What is your excuse?
>
> —Virginia Woolf, *A Room of One's Own*

INTRODUCTION

The fact that this country is experiencing a value crisis needs no documentation. Not only are we confronted with continual change and subsequent ambiguity, but as a people we are particularly uncertain about the function of our social institutions and the role of the individual therein. In the fall and winter of 1971–72, Shane, a leading university educator, interviewed eighty-two prominent futurists in America and England to determine what they might contribute to the establishment of educational goals and priorities (Shane, 1973). He found not only a general agreement on the universal problems society faces but also a growing conviction that education should be more closely aligned with the realities of the human and material world. Some of the problems identified are indeed ominous and portend a future that is more depressing than challenging to contemplate. These broadly defined areas touch issues that concern the rejection of egalitarianism in our society, the distribution of vanishing resources, and the ever continuing accumulation of crises, to name a few. Others are more germane to the whole notion of higher education and accurately describe the difficulties most of us experience as we design newer, more diversified programs. Shane suggests, as an example, that there is no clear social agreement on what constitutes the good life, or, for that matter, on what are the basic characteristics of educated men and women in contemporary society. The interaction of philosophy and events, the reformist ideology of the sixties, has affected us all: the way we think, the way we behave, the way we feel about our very being. Until that time at least the broad category of people labeled as "middle

class" knew the social proprieties and amenities they were expected to respect and observe. Each one was reared with a similar set of expectancies, and the role of social institutions was clear.

Today nothing stands still; "kinetic" is the word of the hour. Expectancies must necessarily be uncertain and changing. Few of us are certain of the exact functions of the universities, the church, the health care system, or the roles of men and women in contemporary society.

No one living in contemporary society was unduly moved when Toffler (1970) suggested that choice has become the most potent quality of modern life. For obviously the technology had expanded in ways that emancipated contemporary man from the concerns and labors of yesterday, and the reformist movement of the sixties had resulted in an overriding value change that freed the individual to choose from the many alternatives increasingly available. The impact on women has been powerful. Certainly the cultural expectations of femininity are no longer fixed and values are changing into definitions that are increasingly individually or situationally determined. Self-realization is a demand of the many. Norms are disappearing and the traditional scripts are being rewritten. Feminism is alive as a social movement once more replete with demands for equal rights, gender role changes, and liberating life-styles. Women may now more freely choose to marry or remain single. They may more freely choose a lesser or greater amount of education. They may more freely and successfully control the number of children in their families; increasing numbers feel free to decide on none at all. Traditional male occupations and professions are increasingly open as options. At no other time in history have women had as free a choice among so many alternatives. However, conflict is inherent in choice, and that conflict is part of the essence of what it means to be a woman or a man in contemporary society.

Since the middle ages, nursing has been an occupation sanctioned by society as appropriate for women, but it too is changing. Girls who choose nursing as a career are quite similar to other girls in the culture in life expectations, but initially most seem more committed to the traditional stereotyped role. Nurturing is that part of femininity that is most closely associated with woman's psychobiological function, and *to nurse* is *to nurture*. The desire of most nurses to look after people is so pervasive that many feel they will soon be the only ones left in the health care system who can and will care about the emotional comfort and well-being of the client. This is not a surprising position for nurses to assume because, in fact, it represents a strongly feminine bias. Women are acculturated to care for others; young applicants to nursing programs say they want to help people. Unfortunately, parents are

more than willing to enroll their daughters in nursing programs as preparation for marriage and maternity. Unwisely, educators have not questioned the selection or its rationale.

The long-term solution to many of the pressing problems of nursing today may be, as some male writers observe (Christman, 1970), the recruitment of more male nurses (at this writing, 99 per cent of all practicing nurses are women), but the status of the changing role of women within American society appears more germane to a theoretical framework for nursing curricula. For as Cleland (1972) says, "Nursing as a human service is so tied to the nurturant role of women that nursing's professional role can expand only as the societal role for women expands."

ROLES

Given the holistic notions of systems theory, it is an empty gesture to discuss women without including men. A change in the role of one necessitates a change in the role of the other, if indeed a rapid or extensive change in the role of either is to be forthcoming. This event cannot be fully anticipated for at least another generation or until changes in child education and child-rearing practices permit the process to develop without undue personal conflict. Anatomy need not determine destiny, but neither will role changes occur by fiat, an unrealistic expectation of some of the more extreme liberationist proponents.

Historically it is true that the roles of men and women are shaped and determined by cultural need and ideology. Nowhere is this thought better conveyed than in the contemporary writings of Ruth Benedict, Margaret Mead, and Erik Erikson, to name a very few contributors to the literature of interaction between culture and personality.

In agrarian societies, men and women are not separated economically or socially in their day-to-day lives, but actively work together to accomplish common goals. Women work in the fields, assist in the proprietary shops, and manage the home and children. The economy is one of scarcity necessitating the contribution of most members of the extended family to the process of making a living and maintaining a home, the locus of work. By contrast, in more urbanized societies the style of relations between men and women is determined by certain other well-defined social patterns. In 1965, Margaret Mead identified them to include: early marriage; marriage as the principal form of relationship between adult men and women; parenthood immediately following or even preceding marriage; a separate home for each nuclear family; the exclusion of all adults except the parents from the home; education for daughters apropos of their potential functions as wife,

mother, and homemaker; and increasing participation of men in day-to-day household activities, including child care and rearing.

The scientific and technological revolution has caused significant changes in urbanized societies. Male-female roles and the family are only two examples of social forms undergoing radical change as a result of that revolution. Technological advances in many fields have altered the economic landscape both to free the woman from menial and arduous housekeeping tasks and to open up many occupational fields hitherto closed to her. Furthermore, family planning has advanced to the point that women in developed societies may, if they wish, devote longer periods of their lives to work outside the home.

Accordingly, increasing numbers of women are working today, some to provide or supplement the family income, and some, it would seem, to seek new forms of self-realization. Nearly two-thirds of all women employed are single, divorced, or married to men earning less than seven thousand dollars a year; obviously these are working to provide basic necessities. On the other hand, the idea that some women choose to work for personal fulfillment is much more difficult to validate from existing data. It would probably be safe to assume that the working wife whose husband's income is high is working primarily for self-fulfillment or material luxuries and equally safe to say that the working wife whose husband earns less than the average wage is working because of need, but the motivations of the growing numbers of employed women who fall between these two categories are indeterminable. There are simply not enough facts to develop any viable theory.

Women composed 20 per cent of the labor force in 1920, 36 per cent during World War II, and approximately 40 per cent today. The figures have shown a slight but steady increase during the past two decades, and further expansion is expected. Three out of five women workers are married, with husband present in the home. In fact, 41 per cent of all married women in the population, with husband present in the home, are employed. The age distribution of women working shows two peak periods: one at 18–24 years and another at 35–54 years. One could easily conclude that women usually do not work during the child bearing and rearing period, except that almost two out of five women workers had children under eighteen years of age. Interestingly, a recent sharp increase in working mothers with small children has been noted. Of the thirteen million mothers in the labor force, more than four million have children under six years of age. Forty-four per cent of all women sixteen years old and over are working.

In reviewing the history of American women, Degler (1965) suggests that "As workers outside the home, women buried the Victorian stereo-

type of a lady under a mountain of reality." Indeed it is difficult to think of women as weak, passive, or dependent when in 1972 there were more than thirty-three million of them employed. Unfortunately, the traditional stereotype has mysteriously prevailed. It would seem that economics and the sheer force of statistics are not enough to loosen the grip of traditional stereotypes on our minds. The social and psychological milieu shapes the woman's role by cultural dictate as surely as do economic forces. It may be that the feminine stereotypes have persisted because as a society we have been so attracted to and enraptured with psychoanalytic thinking. Freudian theory was clearly built on a male model, and woman was the exception to the rule, a deviation from the norm, a pale reflection of the man. Psychoanalysts and other therapists and theoreticians vary widely in their thinking about the role of women or the essence of femininity, but when their ideas were popularized by marriage and family counselors, writers, columnists, social scientists, some physicians and mental health workers, the traditional stereotype of the woman was perpetuated (Rossi, 1965).

Unfortunately the woman is still today thought to reject her femininity if she is not absorbed by her role as wife and mother. Women who choose careers rather than marriage and family, or arrange their life-styles to include a self-fulfilling kind of work, are still often made to feel twinges of inadequacy as women. Modern life may and should be filled with alternatives, but few of us have the strength to transcend our culturally and historically defined sexual identities. Choices dictated by cultural fiat, as Rossi predicted in 1965, may still result in a restriction of aspiration and achievement, an early commitment to seeking and finding a mate, a personal closure to other than a world for which the script has already been written. Mixed-gender housing and the sexual revolution notwithstanding, the possibilities of an achieving life-style for the young college woman have still not raised sufficiently.

The female stereotype begins facetiously in childhood as "sugar and spice and everything nice" but changes in adulthood to other less charitable images. Any quick perusal of the literature reveals: dependent, passive, envious, masochistic, emotional, irrational, impatient, impulsive, flighty, unreliable, unmechanical, good at detail, small, weak, soft, light, dull, peaceful and cold. As Ozick (1970) writes quite amusingly, woman "Is either too sensitive (that is why she cannot be president of General Motors) or she is not sensitive enough (that is why she will never write *King Lear*)." Fortunately there are a few saving graces: nurturing, humanizing, preserving, and adapting, qualities still thought to capture the essential meaning of femininity.

The stereotype for the nurse is synonymous with that for women,

including a strong nod toward anti-intellectualism. A quiet evening before the television can become more than disturbing when the nurse, as portrayed in the typical bill of fare, is viewed as senseless and controlled from without. In addition, the focus on scatological humor in our society immediately brings to mind the association of nurse with activities appropriate to the bathroom. In the 1965 *Daedalus* issue concerning women, McClelland observed that many psychological studies had shown that women were not perceived by either sex as a person or a self but as a member of a couple in terms of woman's relation to man: "Adam's rib, Adam's temptress, Adam's helpmate, Adam's wife and the mother of his children."

In contrast, the traditional male stereotype is: aggressive, independent, active, strong, brave, achieving, rational, utilitarian, controlled, firm of purpose, wary of impulses and correct in judgments.

After examining the stereotyping even from the viewpoint of the literature alone, it certainly is not surprising that women have been unhappy with their image, felt anger or confusion, or doubted their own worth. Women have been traditionally seen as nurturant and expressive, and men as instrumental and active, but when this model is projected upon the individual many of both sexes are thought to be deviants. If matched appropriately word-for-word the stereotyping is a series of dichotomies. That there are differences between the sexes is clearly documented; that they are opposites is highly questionable.

According to Keiley (1972), "There are differences between the sexes in terms of perceptual style, behavioral disposition, and to some degree emotional reactivity based upon differences in endocrine patterns and central nervous system sex-linked neural circuitry." The longitudinal studies of Kagan and Moss, to name one set, clearly elucidate the development of behavioral differences, and the data of contemporary endocrinology and neurobiology confirm physiological differences. Exactly on point, however, Keiley (1972) says there are also profound differences between the same sexed individuals, both male and female, a fact even more strongly documented. Quite clearly the most profoundly influential factor is the acculturation process by which gender differences are shaped. Money and his associates at Johns Hopkins have determined that gender role may be learned by the age of three, and cannot then be changed without resultant emotional damage to the child. Regardless of the actual facts of physiology, the most important variable in learning gender role to the child is the sex the parents believe their offspring to be.

These data provide adequate evidence, not only for McClelland's (1965) statement that "Nothing is absolutely foreordained, women

can learn the male patterns, and men fail to learn them," but also for Seidenberg's (1973) opinion that "Circumstances of anatomy or destiny loom as large or as small as the social rules of society make them."

What is germane is that western civilization is undergoing profound change. In fact, the present span of time may be known to future historians as the scientific revolution. A new role structure for both men and women will emerge, but the nature of the new man and new woman is as yet uncertain (Wheeler, 1972). However the gender roles evolve, the economic, political, social, and emotional facts of life point to times of uncertainty and resultant stress. As Lifton observed in post-war Japan (1965), historical change creates a disequilibrium, a dissonance in the emotional balance between the sexes, causing considerable personal conflict for both men and women. In fact, Matek (1972) believes stress will be the leading candidate for the Number One health issue for the remainder of the century. Changes in gender role structures will account for only a portion of that stress, but will contribute heavily to a value reorientation for the future.

GENERAL NOTIONS REGARDING FEMALE DEVELOPMENT

Given the principal notions of systems theory, it would seem that many different elements would contribute to the issue of gender role change for women. Some of these might be the general state of affluence in America allowing women to remain in the home, a philosophical ambience absorbed and fascinated with the individual child and requiring the most concentrated attention of the mother to the process of child-rearing, and the general disposition of most individuals to think of women as belonging in the home with outside interests directed toward volunteer activities. In opposition to that line of reasoning are the notions of alternative life-styles, more freedom of choice for women, the magnitude of the untapped resources that women represent, and the general and increasing decline in the birth rate. Regardless of these overriding issues, however, the nature of the interaction between the societal milieu and the development in the individual of the more universal personality characteristics needs re-examination, because the developmental life of the child portends the social and emotional life processes of the adult.

Unfortunately the descriptive material on female emotional development is scattered, and, with the exception of numerous empirical developmental studies, there is no model, guide, or composite picture that stands an intuitive test for goodness of fit. The universals and alternatives of feminine development have been poorly articulated by even the most thoughtful theorists. Obviously there are distinctions

in personal life expectancies and cultural expectations by sex, but it also happens that much of the literature on the usual patterns of development for females is unclear and ambiguous. As an example, it is quite possible, as Bardwick (1971) suggests, that girls in adolescence do not experience the usual "identity crisis" that boys of this same age do, but that a firm sense of "who I am, and what I am" is established at a later time developmentally.

Although identifying female developmental patterns is much beyond the scope of establishing a theoretical framework for nursing curricula, some trends and general notions can be described that may be helpful to educators in planning programs for women generally and nurses particularly.

Almost without exception women want to choose to be married, and one expects many nurses will opt for the marriage pattern described by Rostow (1965), "in which mutuality of care and self-realization, as well as intellectual and emotional sharing, have been achieved, or sought after to an unprecedented degree." Women who choose this pattern must find partners who are willing to collaborate in such a commitment; they must recognize that chances for success may be limited or disappointing.

Lifton (1965) has the impression that women who are most feminine—that is, highly adaptive, nurturing, humanizing—suffer the greatest disappointment when they cannot find a mate who is equally motivated to establish and maintain a sharing relationship. It appears that the effectiveness of such an arrangement is highly dependent on the emotional maturity of both partners. The characteristics apparently needed are: a positive self-concept, some common goals and interest, mutual respect and trust, a deep and abiding affection, and a genuine desire and willingness to see the other grow, develop, and actualize. As a listing, these qualities appear easy to accomplish, but, in fact, they are rare indeed. A fusing of the two personalities, in those spheres of life where fusing is desirable, is possible only when there is unusual strength in each separately. It has been suggested by some that at least a small portion of the high divorce rate may result from unreal expectations for mutuality or reciprocation.

Many women will want to become part-time masters of varying competencies. They will desire and acquire abilities as wife, mother, gourmet cook, housekeeper, social director, transportation manager, community affairs participant, scholar, or clinician to name a few, with primary emphasis on the part-time nature of every activity. Surprisingly an increasing group of remarkable women manage to achieve this balancing act with great success. Such a life-style is part of "being

feminine," but impossible to accomplish for some who are consequently left with feelings of inadequacy or inferiority. Women who experience a demanding professional life often choose not to marry, and it may be that these women find commitment to work and the pursuit of married life with the traditional generalist expectations wholly incompatible.

One reason may lie with what we might call the "household imperative": because many of the obligations of managing a family household are rigid or unrelenting—meals cannot be skipped, certain maintenance tasks which are essential to basically sanitary, clean, healthful living cannot be left undone—they sometimes conflict directly with the demands of an occupation or profession. Whenever a woman finds such conflicts between household and job commitments becoming too intense or frequent, she is forced to make choices between the sets of responsibilities. But even when the choice is made to eschew career commitments, a woman will engage in many more different activities in the course of a life-time than a man, who is more focused on achievement behaviors in a particular area of expertise; that is, he is a specialist. Interestingly, the future may cause this whole notion to change somewhat, for a man is also a generalist who acquires abilities as husband, father, landscape artist, financial planner, business manager, carpenter, community affairs participant, mechanic, electrician, scientist, scholar, or clinician, to name a few.

A women's success, however, is less visible than that of her male counterpart. As McClelland (1965) suspects, women may not know how to recognize their own achievements even when they are in fact well on the road to meeting the cultural ideal. A man's success is easily measured by his achievement behaviors: his research, his clinical abilities, his writing, the fortunes of his business, and others too numerous to name. A woman is a skilled amateur in many fields and society rewards her less for her more broadly based contributions to "highly specific others."

Erica Jong has pointedly addressed herself to this phenomenon in the poetry of the new feminist movement:

> Though she is quick to learn
> & admittedly clever,
> her natural doubt of herself
> should make her so weak
> that she dabbles brilliantly
> in half a dozen talents
> & thus embellishes
> but does not change our life.

It is doubtful that educated women, particularly those with graduate education, will desire to be full-time wives and mothers. Femininity for them cannot rest solely on success and satisfaction in traditional female roles. In fact, Seidenberg (1973) questions the value of the idea for any woman, "if as we are told, love is not enough for children, it is equally true for parents. For a woman, as for a man, to be loved by husband, by children, by family is not enough in the quest to be whole."

Traditionally the man has always been more than husband and father, as most have sought, and some found, self-realization in work. Only in the very recent past has the role of houseperson evolved, a male who almost exclusively performs domestic tasks, and it remains for future generations to incorporate these tasks into the male role repertoire, to be freely chosen by men from a wide variety of other alternatives. What is unalterably important, however, is that every person must first have an identity as an individual with hopes and goals for personal development and accomplishment. Unless that identity is present, the individual, either male or female, will become imprisoned by dependency and develop a defeating set of expectancies, incorporating the belief that husband or wife and children will provide gratifications that must come from self. Educated women who do desire to use their college-acquired skills in seeking self-realization and accomplishment outside the arena of the family must exercise wise judgments and those judgments are dependent on determining how much time should be devoted to a vocation, how much energy and how much emotional commitment.

The feminine qualities of giving, nurturing, and adapting have been demonstrated time and again by outstanding women, and according to McClelland (1965) "because they respected themselves and what they could do well, they seemed able to do a great deal more than the average person of either sex."

In the seventies, as in the sixties, the feminine life-style requires a delicate balancing between dependent, independent, and interdependent functioning, and women who aspire to be both feminine and achieving must find that middle ground between personal fulfillment and family happiness that enhances a general sense of well-being for all concerned.

Many women have difficulty achieving that sense of success that comes from matching their own characteristics to the criteria of a social ideal. To be sure, there are perceptual difficulties inherent in making such a comparison. However, several other factors may also be causative. The first is a lack of a role model. Margaret Mead noted in her autobiography that as a contemporary woman she was two generations ahead of others, meaning that both her mother and grandmother had

commitments to the world of work. If, however, according to Seidenberg (1973),

> a girl in her development has no other than the image of a woman in the domestic role, this image will be internalized and become her principle knowledge of what a woman is and does. In spite of later worldly education, the earliest lessons come from all powerful, life-giving, and sustaining giants—parents—and they stick. This learning is, then, the education of how to please, how to be loved, how to survive. These earliest lessons from kin take priority and can be overcome only by vigorous self-purging efforts. The little girl who sees her own mother and aunts and grandmothers invested completely in household matters and disdainful of women who are active in the world of work will feel that any but the attitudes and roles of her female relatives are unnatural and immoral. She is getting her definition of femininity, and will thereafter "know" what a woman should properly do. Contrary to the expectations and demands of reformers, human growth is never acrogenic.

The simple emotional fact is that many women have been socialized in one gender role and then as adults are expected to behave as though they had been acculturated into another, one that has changed since their socialization, and one that is continually changing. The ensuing uncertainty results in stress, and the matching of self to a new social ideal is an effort of will rather than comfort.

The second impediment is the cultural expectation of early marriage. Regardless of a woman's intellectual or clinical gifts and abilities she is thought to be a failure if she does not marry soon after late adolescence; therefore the cultural and parental expectations for her to marry may often interfere with any inclination the young woman might have personally to be self-actualizing or to find self-fulfillment in her own individual way. Parents encourage their daughters to attend college and do well in their studies, but often the encouragement is shallow and lacks any real sense of purpose. Parents frequently think of college education as a stop-gap measure until a suitable and welcome wedding ensues. In fact, many young women receive contradictory messages from both parents and society, similar to that old adage, "Yes dear, you may go swimming, but don't go near the water." Only the message of late adolescence reads, "Yes dear, you may go to college or nursing school, but don't be too smart, too independent, or take your work too seriously, because after all you are going to get married."

Two factors are involved: one is the rose-colored glasses through which the world gazes at young ladies; and the other is how these same young women seek for themselves a firm sense of who they are now and what they will become. Therefore, it is for culturally imperative developmental reasons, in part, that young women in late adolescence seek heterosexual affiliation. This is true in the sense that, over the long life pull, an identity for the woman who chooses to marry has traditionally been established not on the basis of what she in late adolescence aspires to be, but on the basis of what her husband aspires to be. The structuring of the woman's contribution to the marriage partnership must await, or at least work in concert with, the development of achievement potentialities in the man. The simple fact is that women have ever desired and been expected to adapt and modify their own achievement behaviors to be in concert with their husbands. Changes are occurring in the determination of whose achievement needs will be fulfilled, but differences from the traditional pattern are still the exception to the rule. With this thought in mind, it is certainly no surprise that most young college women fail to acquire the motivation for achievement to the same degree that men do. The fact is, students in coeducational schools are competitive, and at the undergraduate level, it does not make good sense for young women to compete successfully with possible mates or at least to compete too well. It may be that sexually segregated colleges are more effective in educating women for this very reason.

If the woman does not marry early, the cultural expectation is at least that she will do so sometime later: we all breathe a sigh of relief when a woman of any age marries. Relatively few young women will choose the single life; among those who choose marriage, there will always be some who will devote themselves completely to their families. It would be a mistake to assume that such a choice is necessarily a sign of excessive dependence or avoidance of achievement; a basic emotional maturity appears to be the key. A woman can fulfill her need for achievement in domestic tasks and derive satisfaction in the traditional feminine role. She need not work outside the home to achieve a feeling of fulfillment and worth, a point sometimes overlooked or denied by activists in the feminist movement.

The third impediment is the high degree of dependency behaviors in women. Whatever the choice of life-style or occupation, the dominant theme in the lives of most women is other people. Moreover, women place an inordinately high value on harmonious interpersonal relationships. Little girls are taught to placate "significant others," to achieve accord in interpersonal relationships, but if the woman relies heavily on

this ability, she may be caught in a web of dependency, debilitating to herself and others. Establishing a proper balance between dependence, independence, and interdependence appears crucial to establishing a feminine identity that matches the cultural ideal and at the same time insures an enhancing amount of self-worth for the individual.

Dependency may be defined as relying on a few significant others to be told how to think, act and feel. Fleming (1967) surmises that the dependent individual has no other responsibilities than to maintain a passive role and keep alive a nurturing relationship. If, however, aggression is defined as the desire to exercise will and passivity (operationalized as dependency) is thought to be the opposite, then the passive individual becomes quite simply a slave to a few significant others: a complaint of the feminist movement since the beginning. Obviously either overt or covert hostility must result. There is no doubt that dependency training is fostered in female development and that it may very well promote passivity (to do as others wish, to be as others desire) as an adult personality characteristic that generalizes from family settings to occupational ones. Moreover, females do seem to depend more than males on the response and reaction of other people for their own feelings of worth, competency, and self-esteem (Kiely, 1972). The learned response of dependency may lead women in occupational settings to be fearful of incurring the displeasure of another individual or a group of individuals, or, on the other hand, to spend inordinate amounts of time in arranging for harmonious relationships. Unfortunately, the art of pleasing others without regard for self-interest can be detrimental to the establishment of a firm identity. It should be noted that dependency behaviors must be carefully distinguished from adaptive behaviors. It may be that the first is a precursor of the second; if that is true, then the self-concept based on the desire to please others may grow into the ability to be adaptive and modify behavior according to the wishes of others without the loss of self or the established identity.

Another whole facet of the idea, however, is that the dichotomy, aggressive-passive, as it is thought to apply to men and women in our culture, may be false. A nearer approximation of the truth is that aggression is expressed passively by most women because they have learned to simulate dependency. When this occurs, women use manipulation to achieve desired ends. In fact, some of the literature in nursing describing interpersonal competencies in the organization actually suggests manipulation (without, however, calling it that) for the ultimate purpose of serving the client in a better fashion.

Deference, on the other hand, is a lesser form of dependency: a part of the total picture, but one that assumes an added importance in

physician-nurse interaction. Deference is defined by Webster's (1965) as the courteous, respectful, or ingratiating regard for another's wishes including the process of submitting or yielding to another's view. In the fifties and early sixties the literature on personality characteristics of nurses was replete with measures on the Edwards Personal Preference Schedule showing high scores for nurses in deference. The question that immediately comes to mind is whether students enter nursing programs high in deference or whether it is developed by the educational process. There is some empirical evidence to indicate that the latter may be true. A fortuitous finding in a doctoral dissertation showed that locus of control scores were significantly more external in nursing students after only one semester of an associate degree nursing program (Haase, 1972). Externality indicates that the individual believes that rewards are controlled by situations or other actors and cannot be mediated by his or her own effort or personal attributes. MacDonald (1972) has also reported her intuitive feelings that nurses are educated to be deferent. Certainly this personality characteristic in nurses is adaptive to the way that care and cure are currently managed in hospitals and other larger bureaucratic institutions. Fortunately or unfortunately, it has until very recently been a part of the feminine life-style, and also a way of surviving harmoniously in a male-dominated health care system. Paradoxically there have always been more women than men giving health care but until the present era, as Jacobi notes, the "backbone . . . has been in the background."

Interdependence means to rely on one another, to modify behavior in response to another's need or desire, to look at a situation from the perspective of all involved. If a woman can please others and also serve her own desire for a separate identity she is then interdependent, the *sine qua non* of femininity. It may be that the essence of the feminine life-style is what Lifton (1965) has called, in another context, the Proteus style of self-process, or the assuming of many different identities pursuant to the felt needs of specific situations, without a loss of unity in thought or personality organization in behavior.

Independence, or the looking to the self for cues to action, thought, and feeling, posits complete responsibility upon the individual, demanding that he or she accept full responsibility for positive or negative reactions. These behaviors must be recognized as assuming a greater part of the female role repertoire if gender role modification is to proceed rapidly. They are already present in many women, but it is difficult to convince many others, with preconceived cultural notions, that these behaviors should be fostered in the female. The arguments of many opponents of the Equal Rights Amendment provide good

examples of the forms these preconceived ideas can take, and the intensity with which the arguments are forwarded indicate how difficult it is for many to change their concepts of the "proper" female role.

The fourth and last impediment may be a summary factor for the rest, that is, a lack of self-respect in some women, a feeling of unimportance. It has been observed by Seidenberg (1973) and others that self-love is grossly lacking in the female. Not only is it rarely present, but it is poorly tolerated by others when it does exist. Unfortunately, self-depreciation may generalize, and women may often condemn members of their own sex who do achieve in the world of work or at least try for alternative styles of living. Unfortunately these women do not seem to understand that they are indulging in self-contempt when they criticize or undervalue other women who do not aspire to the traditional feminine role.

As an example, Schwartz (1971) questioned male executives in large corporations and small businesses, in addition to women who had achieved executive status in both areas, about how they felt about female executives. Schwartz reported that a

> substantial number of businessmen who participated in this study [felt that] women should focus not only on changing male attitudes toward women in management but also female attitudes toward women in senior positions. To a very large extent [they contended] women hold women back; and ultimately, woman's biggest challenge may be . . . removing the distrust, competitiveness and damaging jealousies of other females. These men [felt] that woman's insatiable need to prove they are better than other women is the real enemy, and women will really come into their own only when they are above this kind of competition and can professionally accept, affirm and help each other as men do. Perhaps there is more truth here than women might care to admit, for in this very study most of the women respondees themselves unequivocally admitted they personally prefer working for a man.

Other authors suggest that the lack of an established "code of chivalry" handicaps women who are attempting to work productively together.

WOMEN, EDUCATION, AND WORK COMMITMENT

If it is true as Degler (1965) suggests that America has been favorably inclined toward women from the beginning, how contradictory the record of women in academic and professional life is! Certainly the doors

of higher education opened more rapidly to women in America than elsewhere in the world, but women in some European countries have now surpassed American women at least by number their representation in professional fields. American women, by contrast, constitute a smaller group in traditional professional occupations than they did in the 1930's. As an example, only 7.6 per cent of American physicians are women, whereas women physicians number 15.4 per cent in Sweden, 16.5 per cent in Denmark, and 20 per cent in West Germany. Russian physicians are mostly women, but the extent of their education may not be comparable to that attained in American medical schools. In a study done for the American Council of Education (ACE), it was found that between 1968 and 1972 female representation on college and university faculties only rose nine-tenths of 1 per cent, from 19.1 to 20 per cent. Of all high school graduates, 50.4 per cent are women; 43.1 per cent of all baccalaureate degrees and 36.5 per cent of all master's and doctoral degrees are held by women. Moreover, the findings of the ACE study also include data indicating that women faculty members primarily hold master's degrees; 61.6 per cent hold master's degrees whereas only 15.6 per cent of the total number of women faculty employed hold doctorates. Nurses have been notoriously undereducated: approximately 3 per cent hold master's degrees, and doctoral degree holders still total under one thousand.

For women generally and nurses particularly, the number of years of education appears to be telling in regard to work history and, one suspects, career commitment. A direct accelerating linear relationship exists between the total number of years spent in education and current employment. Two out of three women are high school graduates, and 50 per cent of these are employed. One out of ten women are college graduates, of whom 56 per cent are working. The majority of women with five or more years of college are employed to include 71 per cent of their number. A recent survey found that 81 per cent of women with doctorates work full time (Furniss and Graham, 1973). It appears that the higher the level of education, the greater the level of work commitment.

The college-educated nurse represents approximately 18 per cent of the total nurse population, and those nurses holding graduate degrees approximately 3 per cent. If it follows, however, that numbers of years of preparation are telling in regard to work commitment, increasing the number of college-prepared graduates might have great impact on nursing's portion of the health care delivery package. One suspects, looking at the data, that a woman who has attended a diploma program in nursing, a junior college, a proprietary school, or who has not at-

tended any higher educational program at all, will hold allegiance to specific jobs rather than to a long-term career commitment in the usual sense. Her desire to work in the marketplace or service center may fluctuate with the economy or the needs of her family.

Job opportunities for women like this, the vast majority of nurses after all, will vary for the most part as a function not only of the economy but of technology as well, so that continual learning of new and differing skills must be a meaningful part of their life plan. Old skills and knowledges will deteriorate, requiring multiple entrances and exits from some form of continuing education.

The woman who has earned less than a baccalaureate degree is typical of the vast majority of nurses, whether active or inactive, and her attitudes and work history, or lack of it, are in accord with other similar women in the culture. When the pool of inactive nurses, so often cited in the literature, is viewed from the perspective of the activities of other women holding like academic credentials, it is exactly the same: approximately 50 per cent of each group works. It appears many women can fulfill their need for achievement and wholeness in household or domestic tasks and still retain a healthy self-concept and sense of success. Who can deny either half the right to make a choice?

IMPLICATIONS FOR CURRICULUM CONSTRUCTION

A review of the literature suggests that an increasing number of contemporary women will want to seek new forms of self-realization centered in activities properly belonging outside the home. In fact, achievement behaviors, traditionally associated with masculinity, will become an important part of the lives of more women than ever before in American history. It is difficult to separate women's desire to work from their need to work. Many college-educated women will want to use their skills and abilities not only because it is gratifying to do so but also because they wish to contribute to the overall aims of a humanistic society. An exclusive dedication to husband and family will become for many a foundation upon which to build a new life, one that is more encompassing and more challenging to live successfully. Hopefully this new life will continue to be built around those virtues traditionally associated with femininity: the predisposition and the ability to be adapting, nurturing, preserving, and humanizing. Many distinguished theorists have pointed to the dire need of these personal attributes in professional, business, and political affairs.

In fact, these very qualities make women particularly useful in filling at least some of the existing gaps in health care. After World War II when hospitals expanded services and facilities, nurses voluntarily

relinquished many of the service functions traditionally associated with their discipline. Allied health care workers began appearing on the nursing units in increasing numbers performing highly specialized direct care activities. The nurse, on the other hand, remained content to perform the more generalized functions of sick care, including the overall coordination of the activities of all those specialized others. Since that time, however, social issues, many resulting from the reformist movement of the sixties, have resulted in new directions for health care and new roles for nurses. In fact, the nurse, at least in the view of some, may become the gate-keeper to the entire health care system. At least the contribution of the nurse will be vital to the implementation of a system in which everyone has equal access to services. Moreover, the gaps in the present system may very well be filled by nurses functioning in new or relatively new roles.

Certainly, quality care of the aged is one of those gaps that nurses are admirably suited to fill. It is hard to imagine another area of service where the feminine virtues of adapting, nurturing, humanizing, and preserving could be better used. That is not to say that these virtues are enough to accomplish the goal of quality care for the elderly, but it is to say that the feminine acculturation toward these qualities will be helpful in acquiring the other competencies that are needed. How ironic that many homes for the sick aged are called "nursing" homes but exist without quality nursing services. Geriatric client care in the future may require the development of a newer role for nurses, one that is highly independent, one that involves everything from management to policy-making, from sustaining a one-to-one relationship with the client to family counseling.

The whole area of the management of stress is another for which women are particularly suited due to their life-long interest in the interpersonal lives of others. If as Matek (1972) assumes, stress, anxiety, and alienation become the primary health problem for the remainder of the century, then nurses must play a leading part in determining the direction and management of the care required in this vast endeavor. The implications of this assumption for curriculum development are immense. Not only must interpersonal skills and knowledges be taught, as they always have been, but other teaching strategies must be devised to enable students to learn more about their own particular personality dynamisms and behaviors. A high-level practice skill for the management of stress simply cannot be taught in short programs or short periods of time.

Nurses will also move into primary care in greater numbers than ever before. In fact, some plans for the future direction of health care desig-

nate nurses as the first contact any client will have with the system. Interdisciplinary and systematic planning between the various health disciplines will be required for the implementation of any national health care service design, but it is more than likely that the nurse will be a key figure in its delivery. Certainly traditional feminine virtues might make the whole process a more humanizing one. Those nurses who desire to change the system to encompass more care as well as cure have an opportunity at hand.

Quality care for the chronically ill, those not requiring direct medical intervention for long periods, is another gap in the health care system admirably suited to nurses possessing strong feminine qualities. The nursing units at Loeb Center may become the prototype for chronic disease care that will be given in satellite centers for large hospitals including a home visiting service. Chronic-disease hospitals with back-up by tertiary center consultation may become the almost exclusive responsibility of adequately prepared nurses.

Nurse educators, if they are to prepare students for traditional roles in addition to new roles, will be faced with difficult tasks and decisions. Certainly they cannot change the social norms of what it means to be feminine in our society. What they can do, must do, is seriously consider in their planning the desires of most women to live an achieving life-style as well as to seek fulfillment in the roles of wife and mother.

One problem deserving much more direct attention is the selection of young women for educational preparation in nursing. If the existing data base is seriously evaluated, it is obvious that preparation for nursing leadership must be given at the graduate level. This means, of course, continuing graduate programs for nurses holding baccalaureate degrees in nursing; it also means giving a generic education to individuals holding baccalaureate degrees in other disciplines. The reason for this is the apparently realistic expectation of a greater work commitment from those educated at the graduate level. This statement is not meant to detract from the many fine contributions of diploma, associate degree, or baccalaureate graduates; it is simply meant to comply with a data base on women generally that indicates that the greater number holding advanced degrees work. Currently large sums are being spent on undergraduate education but the work attrition rate is indeed alarming. If more funds could be diverted into graduate education, a greater return would be realized in terms of the projected expansion of the health care system.

Until the very recent past, the undergraduate student has been most primarily the young lady in late adolescence. Currently nursing programs are also admitting the adult woman student, the mother with

small children, the grandmother, the woman with a previous work history in nursing. One supposes that this group of graduates will be a better risk to continue practice after completing the nursing program. But if it is true that adolescent girls do not develop a firm identity until a later time in life, then it behooves educators to think about an articulated nursing curriculum; one with many entry and exit points; one with both vertical and horizontal mobility; one that builds on a common knowledge base; and one that includes readily available forms of continuing education. Such a curriculum is not only now in the educational spotlight but also adapts itself well to women's lives, enabling them to work at their own pace in updating their knowledge and skills and at the same time allowing them a choice of life-style suited to their own particular desires and expectations. An area of concentrated study, or to use that much maligned word "specialization," might be started much earlier in all educational careers. If nurse educators now agree that "everything" can't be offered to "everyone," then after a common knowledge base is taught it appears reasonable to offer a concentration of courses in the student's area of interest and ability.

Nursing faculties should also accept the responsibility, at least in part, for fostering an enhanced achievement motivation in their young students. Given the renewed force of the woman's movement, in few fields are the future challenges so numerous or the work as yet so underdeveloped as in nursing. Nursing has the opportunity to assist with the development of applied science in quality nursing care for the aged, the chronically ill, the mostly well, to name only a very few areas needing research. The intellectual task of developing the knowledge base that describes the services needed, the strategies for achieving those goals, and the skills to give the services is stimulating indeed. In addition, the service component of creating new roles, providing new services, of being at the interface between humanism and health care technology will require a new kind of leadership from those nurses desiring to achieve in the world of work.

Another problem of first priority to many nurses is their desire to change the health care system to one that is more humane for both clients and workers. To achieve this goal most nurses believe that a change in the present power structure must be forthcoming to include nurses in the decision-making process for planning and giving client care. The difficulties in effecting this change have caused many nurses to feel powerless and unimportant, generating a rage that is just beginning to take another direction. In the sixties, nursing facilities, like social work facilities, began to view their young graduates as change agents, expecting them to create new practice and new attitudes in

various health care settings. The approach of the individual change-agent strategy was unproductive, particularly for the reason that the change agent selected was female and less than twenty-five years of age. A more workable plan of confrontation must now be put forward if nurses are to make their voices felt in policy decisions that will greatly affect their working lives.

The efforts of nursing organizations to establish policy and to influence legislators and other disciplines to act favorably on behalf of nurses have provided an excellent foundation for further energetic work. Nurses must be untiring in their efforts to work more effectively together if they are to bring about the changes in their working lives that they desire. In 1972-73 only 21 per cent of nurses belonged to the American Nurses' Association. Clearly, then, curriculum planning should include the provision of opportunities for nurse students to work together harmoniously, to take risks based on reliable data, to know and respect the abilities and accomplishments of their peers and leaders, to see their flaws, and effectively negotiate a better position. Political power strategies cannot continue to be thought unfeminine or "not in the best tradition of nursing" if the ends desired are to be achieved. If it is a true assumption that women are inexperienced in productively working with each other, then this opportunity to practice appears imperative. The theoretical study of change strategies or movement of power within a group is simply not the same as arranging small confrontations or small conflicts to be resolved by students working together to achieve a mutually agreed-upon goal.

If it is true that some women lack a proper sense of self-respect, or adequate feelings of self-worth, then nursing faculties may want to investigate and allow students to elect courses from those offered by the women's studies program. Certainly there is much in nursing history to demonstrate courage in the face of adversity, determination, and achievement in women, subject matter that would be a valuable addition to an interdisciplinary study. In addition, some graduate programs in nursing are now holding small group discussions of women's issues similar to the "consciousness-raising" sessions of the liberation movement. A few group sessions on various feminine life-styles might be very beneficial to the personal development of many students in undergraduate programs as well. Role models of various feminine life-styles should also be active in the life of the nursing school. They might include: the achiever whose primary satisfactions are focused on work, the part-time specialist who is master of varying competencies, and the woman whose primary satisfactions are derived from domestic life. Preceptorships are another way of arranging a more personal student

view of varying feminine life-styles.

The early history of the women's movement has recorded a struggle over the desires of the members to be egalitarian in practice, to reject elitism, and to enhance the "sisterhood." It is interesting to speculate about the correspondence, if there is one, between the desire for egalitarism and the broad parameters that define the term *nurse*. The client most often defines *nurse* as "the nursing assistant"; the physician and other health care professionals define her as "whichever nurse is staffing the unit"; and the academy defines her as "one of the faculty." As Merton (1962) pointed out, the parameters of nursing are notoriously wide. To say that "a nurse is a nurse is a nurse" is often defeating to groups who wish to be egalitarian and yet at the same time decisive at the policy-making level. Other terms to define the levels of practice may come into usage, as they have in medicine, but until that moment, work should be directed toward defining nursing practice in terms of levels of skills, commonly used strategies, and the relative independence of nursing behaviors. To educate for independent behaviors may be maladaptive for some and adaptive for others, and to educate for deference may be a disaster for most but necessary for others. The identification of differences in terms of job expectations must be an item of first priority.

WORKING PAPER TWO

Higher Education: Trends and Tenors

Along with radical changes in the health care system and in the position of women in society, nursing education has to deal with fundamental changes in the system of education beyond the high school. Sixty-five per cent of the nation's nurse preparatory programs are now in colleges, junior colleges, and universities, and the proportion still in hospitals dwindles yearly. New opportunities and new constraints in the post-high school educational system will affect nursing education just as surely as they will liberal arts, medicine, and law.

It is no longer true that it takes thirty to fifty years for a new idea to be incorporated into the mainstream of education. The pace of change in education has quickened in the past fifteen to twenty years, as has the pace of change in our lives generally, and its magnitude has grown. Trends and developments becoming clear today are likely to have "built themselves into the system" by 1980.

A NEW DIVERSITY

Many formerly private institutions have recently become parts of state systems of higher education, teachers' colleges are becoming state colleges, and state colleges have become universities and thus, usually, multipurpose institutions. The past twenty years of swelling enrollments have also seen the "homogenization of higher education." The phrase constitutes a chapter heading in the report of the Newman Task Force, which states: "Our colleges and universities have become extraordinarily similar. Nearly all 2,500 institutions have adopted the same mode of teaching and learning. Nearly all strive to perform the same generalized educational mission. The traditional sources of differentiation—between public and private, large and small, secular and sectarian, male and female—are disappearing. Even the differences in character of individual institutions are fading" (p. 12). The fact that there is more intra-institutional diversity in course offerings may be read as further evidence of homogenization, since "the uniform acceptance of a diverse curriculum is an indication of a growing similarity of mission" (p. 13).

A look at the kinds of institutions establishing new baccalaureate nursing programs tends to bear out Newman's thesis. Of 11 bachelor's degree programs opened in 1971-72 (National League for Nursing,

1973), seven were in state universities having no medical center as such, three were in private institutions once chiefly limited to liberal arts and teacher education, and only one was in a university already providing a medical-health professional specialization.

While institutional outlines and structures have become more and more alike, diversification has begun to occur in who is educated, where, when, by whom, and under what conditions.

Who Is Educated

Two major forces seem to be changing our ideas about who should receive more than the high school education already universally available. One is the increase in technology in all aspects of our lives, rendering special training a necessity for making a decent living. The other is our growing conviction that in a democracy everyone has the right to make a decent living, therefore the right to a post-secondary education.

There are corollaries: (1) In a rapidly changing technological society, old occupations obsolesce and new ones open up, making second and even third careers a frequent phenomenon. (2) In addition to having the right to make a decent living, everyone has the right to improve the quality of his life if he wishes to do so, and whether the individual's definition of "improved quality" means upward mobility or enhanced appreciation of the world around him, it is likely to entail further education.

The impact of these forces on education beyond the high school will vastly increase the heterogeneity of the collective student body as to age range, background, and ability.

Though adult students are not a new phenomenon in higher education, they have historically composed a very small percentage of the total registration. A change in this picture has been slowly coming for some time, predicted in the late sixties by such qualified observers as Nevitt Sanford, Lewis Mayhew, and others (Eurich, 1968). Recently the enrollment of adults has accelerated; in 1972 only 52 per cent of the nation's college students were in the 18-21 year age group (SREB, 1973). Whereas in 1967 persons 22 to 35 years old constituted 32 per cent of college enrollments, in 1973 they made up 40.2 per cent. Doubtless prophecies of declining enrollments, combined with the first pangs of the "new depression of higher education," have rendered educational institutions more receptive to the idea of accommodating the adult student. Thus in the recent literature we find references to adults as an educational "market," *viz.*,

> The market of eighteen to twenty-two year olds is not drying up completely, but it is levelling off. The market of adult

students is inexhaustible. Their need for continuing education, life-long learning and skill building or rebuilding is an inescapable fact (Bulpitt, 1973).

Across the nation, colleges . . . are devising an unprecedented array of new courses and programs designed to attract the adult learner. More than ever before, they are planning courses specifically aimed at a sharply defined share of the "market", be it airline stewardesses, accountants or women who want to resume their studies or go back to work (Ricklefs, 1974).

Of course, as both these quotations imply, other factors are also at work, a dominant one being the need for updating, for occupational progression, or simply for gainful employment. Nursing education has long recognized these needs, as is attested by the existence of a number of refresher courses, special degree programs for diploma graduates, and enrollment of mature women in associate degree programs. A more favorable climate for adults in higher education generally may facilitate nursing's efforts.

Like the adult student, the student from the lower socioeconomic strata is not entirely a newcomer to higher education. We have had some twenty years of what Jencks and Riesman (1968) called the "meritocratic" era of higher education, when colleges and universities recruited and (often with federal help) subsidized "promising" young people from social classes other than those from which most of their students came. Now, however, with the growing need for special training at a number of occupational levels, we are seeing a surge in enrollment of students of lower socioeconomic status and lesser academic inclination. In an analysis of raw data compiled by four previous studies involving a grand total of some 129,000 subjects, Cross (1971) concluded that "the distinguishing characteristic of the young people seeking post-secondary education in the 1970's is their low level of academic achievement on traditional measures in traditional curricula" (p. xiii). The group in the lowest third on tests of academic achievement, whom Cross calls "new students to higher education," are "swept into college by the rising educational aspirations of the citizenry. For the majority, the motivation for college does not arise from anticipation of interest in learning the things they will be learning in college but from the recognition that education is the way to a better job and a better life than that of their parents" (p. 15). Though a "substantial number" are members of minority ethnic groups, most are Caucasian; and though about 25 per cent are the children of college-educated fathers, the

majority come from blue-collar, non-college families. They plan to enter public community colleges or vocational schools.

An analysis by Martorana and Sturtz of several more recent studies underscores Cross's findings. Occupational (i.e., sub-baccalaureate and terminal) students "came from lower socioeconomic backgrounds and displayed less academic aptitude in terms of both high school grades and test scores" (Martorana and Sturtz, 1973, p. 22). That occupational students (so defined) constitute an increasing proportion in post-secondary enrollments becomes ever more clear as we advance into the seventies.

Many institutions are mounting programs to reach this new mix of adults, varied socioeconomic backgrounds, and the less academically able, along with their traditional students. Among the 89 grants announced in 1973 by the U.S. Office of Education from the Fund for the Improvement of Post-Secondary Education were 31 projects aimed at the following groups of non-traditional learners: non-college-age women, minority women, adult urban women, urban residents, industrial workers, high-risk students, home-based students, rural residents, veterans, minorities, Indians, Puerto Ricans, Spanish-speaking adults, prison inmates, former inmates, and (unspecified) "unserved clientele or new clientele" (*Chronicle of Higher Education*, July 30, 1973.)

Schools of nursing have joined this trend to reach out to new groups, of course. In the past few years a number of special programs have been designed to recruit and retain disadvantaged or high-risk students who would not normally have gone to college. Other special programs, such as those for policemen and for military paramedics, may also be seen as part of the trend to provide for divergent student groups.

Where Education Is Available

Obviously, to serve such groups adequately, education must be available in more places and at more times, rather than locked into an academic year in a sequestered location. Unquestionably the logistical inaccessibility of higher education has been a major block to many persons in the recent past. The Commission on Non-Traditional Study, in a survey conducted in 1972 of a "representative sample" of 3,910 persons aged 18 through 60, found that while 30.87 per cent had received instruction within the year, 76.77 per cent would like to know more about something or learn how to do something better (*Diversity*, p. 15). The reasons given by those who did not take formal instruction "demonstrate rather convincingly that in the minds of a very large number of American adults, education—however much desired—is still

too costly, too rigid in its formal requirments, and unavailable at the places and times it is needed" (p. 19).

If higher education is accepted as a right rather than a privilege, and if previouly underserved populations are to be reached, we can expect acceleration and expansion of provisions for making education available to the student where he is and when he wants it.

Existing urban institutions are growing in importance and in size; concentration of higher education in suburbia and exurbia is in process of dilution. Multipurpose, community-oriented, urban universities continue to develop from what originally were limited-purpose institutions or branches of parent institutions located elsewhere. The metamorphosis of Georgia State University in the past twenty years from an evening college branch of the University of Georgia to its present status as an autonomous, full-scale university is a case in point. Additionally, we may anticipate the fulfillment of Cosand's prediction (1968) of a major community college campus in every urban center to provide educational opportunities to the inner city. The new inner city branch of Miami-Dade Community College is one example of such a development. Colleges and universities located outside urban areas will participate in consortia and extramural arrangements to assist in meeting the growing needs for higher education in a metropolitan complex.

For the less populated areas ways are also being found to provide post-high school education. Although the rate of increase of two-year colleges has slowed down, new ones are still being added to state systems. (Thus, for example, in 1973 Georgia authorized four more junior colleges to be added to a system already numbering fourteen.) Most of the few states not yet having community college systems are moving toward establishing them. This continuing growth suggests that within the foreseeable future community colleges will be located within one-day commuting distance of all but the most remote populations. Communications technology can put formal education within the reach of even these.

It can, but will higher education use communications technology effectively for this purpose? At the risk of seeming to digress, it might be worthwhile to take a quick look at where we have been in instructional telecasting and where we might go.

It is now more than twenty years since Arthur S. Adams, then president of the American Council on Education, noted the significance of the FCC's reservation of television channels for education in a speech which contained these words: "Television gives us a means by which the individual may be reached wherever he may be, in order to bring him new resources of education at a time when those resources are

sorely needed" (Adams, 1952). During the ensuing decade at least 15 colleges and universities undertook to broadcast televised credit courses to off-campus students. This number did not include those offering credit for nationally televised courses such as Continental Classroom (cf. McKune, 1963). Some of those experiments became institutionalized and are still around, notably those of Chicago TV College and New York University's Sunrise Semester. Most of them, however, apparently dropped into oblivion. Reasons for this can readily be adduced, including the preoccupation of institutions with tremendous internal pressures during the middle and late sixties, the chronically low estate of continuing or extension education, and the lack of creativity and resources that went into most of those instructional productions. At any rate, the telecasting of credit courses for off-campus study all but disappeared.

Predictably, the pressures of the seventies for extending instructional services to new constituencies are prompting renewed attention to television's capability for outreach. The success of Britain's Open University, with its important television component, doubtless intensifies the seriousness of this attention. Thus the University of Houston's TV station KUHT, one of the first in the nation to telecast college courses in the early fifties, suspended its college credit broadcasts for several years, but recently announced the intention of broadcasting the Open University videotapes in connection with UH's trial of the OU materials (Zwicky, 1973).

Where state educational networks have flourished, televised college courses are on the rise. The University of South Carolina broadcasts 55 courses to students in its eight regional campuses and to most of the state's 17 Technical Centers (GPN Field Report, 1974). The Maryland network operates the Maryland College of the Air, providing courses which in the fall of 1973 were utilized for credit in 17 colleges throughout the state (Smith, 1973). At least two very ambitious projects are in the final planning stages. One is the Massachusetts Open University, an "Open Learning Network" providing courses "packaged for use in regional centers, on public, commercial or cable television, and in neighborhood centers" (Kramer 1974, p. 4), and involving 50 institutions in its planning. The other such project, the State University of Nebraska (SUN), is financed by the National Institute of Education in an effort to ascertain whether it can become regionalized and serve as a national model (*Chronicle of Higher Education*, May 28, 1974). SUN will combine certain features of both Britain's Open University and the Children's Television Workshop to offer, eventually, two full years of college in off-campus study (Wall, 1973). SUN's research and production plans as described are reassuring to those who hope higher education

may have learned, from the credit course telecasts of an earlier period, that both imagination and resources are required for the production of effective "software of distinction."

If these ingredients are not supplied for the new rush to broadcast media, a tremendous educational opportunity will go begging. Today technological means of reaching the remote student are abundantly present and promising to multiply. More than 200 television channels are owned and operated by non-commercial interests—universities, school systems, or communities in the main. Most states have statewide networks for educational and public purposes. Cable television is growing rapidly, offering multiple channels, a means of telecasting to geographic pockets out of broadcast signal range, and a way to bring distant signals into many communities. Cable television also has an inherent two-way capability that conventional broadcast television does not have. Community, school, university, or PTV station ownership of cable systems is being promoted in many quarters (Vlcek, 1973), and current FCC policies are favorable to CATV's use by education. The Cabinet Committee on Cable Television, in its report to President Nixon, recommended that the federal government subsidize research and demonstration in the potential use of cable television, including its application to adult education (*Report on Education Research*, 1974). Finally, experiments with NASA's ATS-1 satellite are demonstrating that instructional communications can be delivered to widely scattered rural areas at much less cost than ground-based television (Polcyn, 1973). The Veterans' Administration plans to interconnect ten hospitals with the ATS-F satellite, which is already delivering instructional materials to teachers in areas of rural Appalachia and the Rocky Mountains previously inaccessible to television signals.

It looks as though Dr. Adams' prognostication may yet be fulfilled.

When Education Is Available

The "where" is only half the battle in making education more widely available; the "when" is equally crucial in serving new student populations who are already in the workforce. Whether they are adults enrolling for more education or young people of traditional college age whose families cannot help them financially, an increasingly large percentage of post-secondary students are employed and unable to meet traditional daytime class schedules; nor are most of them able to take summers off to go to school as teachers have done in the past. Indeed, a 1972 California survey showed that although some 72,000 adults wanted to earn degrees, only a third of them were willing to come to a college campus for classes during the summer (*Higher Education and*

National Affairs, 1973). Daily and yearly scheduling are perforce becoming more flexible to accommodate these conditions. Fordham University, for example, has inaugurated a special program in which classes are repeated at various times, so that students unable to attend at one time can go at another, and those unable to attend any of the scheduled times can make up the class via tapes and tutorials (Ricklefs, 1974).

However, questions of where and when are increasingly being met by programs that minimize the necessity for the student to appear on campus at set times and places. Probably the most complex such enterprise—as well as the most diverse—is the University Without Walls participated in by a multi-institutional consortium, with each autonomous member institution operating a number of units in various places, utilizing existing community facilities, flexible time units, and a variety of opportunities for learning. UWW's *First Report* (1972) has this to say about the "when": "Although almost all of the 3,000 enrolled University Without Walls students began their programs in the fall of 1971, that was the only thing that all UWW students will ever have in common. From now on, students will enter the program at various time periods, they will study in 'episodes' or 'variable time frames' that best suit their program, and will be graduated when they have achieved the learning objectives agreed on by the student and his advisor, be it one, four, ten or twenty years after he entered" (p. 24).

UWW has thus thrown out another traditional aspect of the "when" —that is, when the student begins, suspends, or resumes his studies and when he terminates them. It is an example of the thirty-year lag in our attitudes about education that we still think of going to college as an unbroken four-year span following high school graduation. Mayhew and Ford (1971) point out: "In reality students have made interrupted education the rule rather than the exception. Less than 50 per cent of today's college freshmen will receive the bachelor's degree four years from now. However, in some institutions 65 to 70 per cent of these freshmen will receive a bachelor's degree within the next ten years. The rapidly growing public junior colleges are one institutionalized way of allowing for discontinuity" (p. 75).

Of the 1,182 institutions surveyed by the Commission on Non-Traditional Study, 48 per cent reported that "dropping in and out is facilitated but not encouraged, and in an additional 28 per cent the practice is neither encouraged nor discouraged" (*Diversity*, p. 71). "Stopping out" before ever entering college is another form of interrupted attendance that seems to be gaining in favor. Many colleges now (the University of California–Davis, Amherst, and Beloit among them) are guaranteeing deferred admission to successful applicants who want

to take a year off between high school and further education (Welch, 1973). Robbins (1973), who differentiates between "the alienated drop-out, the stopout, and the shoved-out," states that "Many colleges now have formal programs approving or even encouraging a stop-out period, some on a deferred admission basis, some on a leave of absence basis" (p. 74).

The Newman Task Force urged that interrupted attendance be legitimatized, so that students could enter and leave the system according to their individual needs, on the ground that "experiences outside formal education . . . would strengthen their motivation and increase their ability to choose relevant courses of instruction" (*Report*, p. 67). The argument can be pushed still further: If educational programs and services were planned to allow for discontinuity, the student starting out in a one-year vocational-technical course could work his way in and out of successive steps up the educational ladder until he had gone as far as his abilities and inclination would take him. America would thus realize what has long been a pious hope—an educational system that would permit each individual to be educated up to his potential. It is in line with this kind of thinking, of course, that in nursing education, as in a number of other fields, there is currently frequent mention of making possible a career ladder, with multiple entrances into and exits from the educational system available to the individual.

Who Does the Educating

With a heterogenous student group presenting themselves for instruction at irregular times, it seems a logical co-development that faculties should become more diverse also. There are many reasons to predict that this will occur. Faculty diversification has already begun, of course, as a result of national pressures to employ more women and more members of racial minorities. The trends described in the foregoing sections may be expected to produce a still more varied faculty.

—As new kinds of students enter and move through the post-secondary system, some of them will remain in or return to the system as teachers.

—As new kinds of occupational goals are provided for in the curriculum in response to new students needs, teachers will be drawn from new manpower pools previously untouched by higher education.

—As more instruction is offered at unconventional schedule times, more use will be made of part-time faculty whose major careers are in other scientific, technical, professional, or business occupations.

In this connection, it is significant to note that most institutions participating in the University Without Walls are making extensive use of adjunct faculty people from many fields, who are not primarily academicians (*First Report*, 1972).

A weakening or re-definition of the tenure system may encourage flexibility and diversity in faculty appointments. That the tradition of tenure is being seriously questioned is obvious in the increasing number of articles attacking or defending it in educational publications in the last two or three years.

Changes in faculty composition will bring with them changes in faculty orientation. A higher proportion of part-time teachers from other fields will diversify the experience and interest of the faculty as a whole and tend to reduce the concentration of scholarship and research. The pursuit of scholarship at the expense of teaching has already been the target of a good deal of unfavorable public attention, thanks to the student discontent of the last decade. Recognition of the importance of teaching as a faculty responsibility continues to receive impetus in the seventies, as grants for faculty research and study are less and less available and as legislatures interest themselves in faculty work loads. Bayer (1974), in comparing a 1968-69 survey of faculty with the one conducted in 1972-73 by the American Council on Education, notes that the average number of classroom teaching hours rose at all types of institutions. He attributes the increase not only to legislative concern, but also to the re-emphasis on teaching activity and performance as critical evaluative criteria for faculty promotion and advancement. He also notes that, "Asked to describe their single most outstanding professional accomplishment or achievement, most faculty chose experiences in teaching over other areas of achievement such as research and writing or the attainment of professional credentials or present position." In an article entitled "Education at Harvard," Riesman (1973) refers to "the new pressure on teaching, which is part of the current academic climate" (p. 33). If a teaching orientation is endemic among the faculty at Harvard, we can be sure many other institutions will see that it becomes epidemic if it has not already done so. That this trend is healthy from the learner's point of view few will deny. However, as the center of gravity shifts from research to instruction, it is to be hoped that fields which are egregiously under-researched, as nursing is (*cf.*, for example, Diers, 1972) will find it possible to expand research and fortify instruction at the same time.

Under What Conditions

To the extent that academic concern has already begun to re-focus on instruction, there is discernible a trend toward diversifying the methods of teaching and learning.

"Personalized Self-Instruction" (PSI) and variations thereof are coming more and more into use. The salient features of PSI are (1) the formulation of clear course objectives, which are also made clear to the student, (2) the opportunity for each student to proceed at h's own learning pace, (3) mastery of one unit of study before proceeding to the next, (4) use of lectures and demonstrations as vehicles for motivating students rather than as sources of critical information, (5) frequent and quick feedback to the student, and (6) placing the responsibility for learning on the student. "The personalized or individualized approach . . . has been adopted in a variety of courses, including chemistry, mathematics, earth sciences, physics, engineering management, philosophy, psychology, and statistics. The spectrum of schools in which these conditions for learning have been introduced covers the community college through such prestigious universities as the Massachusetts Institute of Technology" (Milton, 1972, p. 71).

PSI has much in common with audio-tutorial instruction as it is usually practiced by followers of Postlethwaite. There are numerous variations of the audio-tutorial concept, according to the particular configuration of audio-visual and other learning materials in use. Most systems of audio-tutorial instruction, like personalized self-instruction, emphasize learner self-pacing and minimize the role of the teacher as lecturer. They also emphasize a multisensory approach to learning, rather than placing reliance on the written or spoken word with a few demonstrations and/or pictures. Audio-tutorial instruction has gained tremendous currency in the sciences and in scientifically based professional curricula such as medicine and nursing. Nursing programs making extensive use of this type of instruction include those at Arizona State University, Emory University, Indiana University, the University of Maryland, St. Mary's Junior College, Houston Baptist College, Hampton Institute, Delta College, Henry Ford Community College, and the University of Wisconsin-Milwaukee—to name just a few.

In addition to their use in audio-tutorial programs, technological media are being employed to change teaching and learning in numerous ways, from complex dial-access installations to simple check-out systems for audio or video cassettes, from computer-assisted instruction and simulations to single-concept films. As technology increases and diversifies in our life generally, as its products become ever more com-

mon, more taken-for-granted, technological teaching and learning methods will continue to become more accessible to the everyday classroom and more unremarkable in it. Hopefully, "professors finally will generally have overcome the subconscious fear that the machine would replace the human" (Mayhew, 1968, p. 214).

It will be noted that all means described above for diversifying instructional methods—including the technological media—place more responsibility on the student for his own learning and tend toward independent study. In the ultimate form of independent learning, the student not only sets his own pace and proceeds without constant supervision; he sets his own goals and decides when they have been met, seeking professorial guidance in the process on need rather than on a schedule. The relationship between teacher and learner changes: "The teacher's role is not that of director, but of resource. . . . It is the teacher who responds to the learner" (Moore, 1973, p. 670). It is this form of independent study which the University Without Walls promulgates, and which Mayhew predicted in 1968 "will be so well entrenched by 1980 that every student will spend as much as a third of his undergraduate years working on his own" (p. 212).

The trend toward viewing students as capable of assuming responsibility for their own learning has a logical concomitant: viewing students as sufficiently mature to participate in the real activities of the real world. Much of the recent student protest and demand for relevance stemmed from the students' effort to put across this view, and they made their point. Formal academic recognition of student participation in a broad spectrum of public and business affairs is gaining ground each year, especially in experiential education and co-operative education.

While there are many versions of experiential education and many names for it, in general we are talking about provision for a planned internship or period of employment, often a summer or a semester, in a community agency, governmental office, or private organization, with prearranged supervision of the learning experience, as well as credit for it, being given by an appropriate department in a college or university. Twenty-six state and metropolitan governments have established central offices to co-ordinate the requests of students wishing such experiences with colleges co-operating by extending credit and agencies offering placement opportunities. Several hundred colleges, junior colleges, and universities provide some form of experiential education (Lewchuck, 1973).

Co-operative education, which might be thought of as an older first cousin of experiential learning, has noticeably gathered momentum

in the past few years. Co-operative work-study arrangements now are available at some 400 institutions (*Chronicle of Higher Education*, October 23, 1973). The impetus of federal funding is no doubt responsible for much of this growth; but we must also consider that it is an idea whose time has come. The number of curricula now involved extends to a much broader range than business and engineering, the original fields. Education, law, and the health fields have been major additions (Knowles, 1971). Community colleges in substantial numbers are engaging in co-operative education programs.

Recognition of the educational value of a non-academic experience is concretely expressed, not only in the growth of experiential and co-operative education, but also in the movement toward granting academic credit for relevant experience obtained completely outside the system. The Commission on Non-Traditional Study found that of 1,882 institutions surveyed, credit was granted for the following kinds of work experience in the percentages indicated:

Volunteer work in a community agency	28 per cent
A completed work (book, piece of sculpture, patent, etc.)	17
Participation in community theater, orchestra, or civic activity	14
Co-operative work experience	35

Most of these examples stop just short of giving credit for full-time, paid employment. However, the growing number of external degree programs include employment experience as a source of learning which may be validated by examinations. In the Regents External Degree in the state of New York, for example, "The bachelor of science in business administration program consists of both a business and a general education. . . . In the business component, candidates must demonstrate basic competence in accounting, finance, management of human resources, marketing, and operations management by passing specially designed examinations" (Nolan, 1972, p. 9). Similarly, in the Associate in Applied Science in Nursing program, "Candidates, in general, will be required to demonstrate competence in the areas of health, commonalities of nursing care, differences in nursing care, occupational strategy, and clinical performance . . ." (Nolan, 1972, p. 10). No one inquires where the business person learned accounting or the nurse health care; it is enough to ascertain whether the necessary knowledge and skills have been acquired.

By the end of the 1972-73 academic year the New York program had awarded 413 external degrees; a similar program in New Jersey awarded 70. Florida International University and the University of Alabama, among others, have made available plans for earning degrees on an external basis. A reasonable prediction is that trends in co-operative education, interrupted study, and competency-based credit policies will combine to make feasible a planned progression of study and work with each re-entry into either education or work being done at a higher level. Academic credit for relevant work experience will become more common and better standardized.

Competency-based degree programs validate and grant credit for a wide variety of experiences other than employment or courses. Under such policies degrees are based on evaluated attainments rather than on hours of exposure to formal instruction. It may be hard for someone whose whole life has been devoted to systematic disciplinary studies to imagine how a student can achieve a mastery of an intellectual or complex subject without encountering it in some kind of orderly "textbook" approach. Such persons may find some comfort in contemplating the implications of the research of Keller and others on programmed instruction, which demonstrated that "The logical order of presentation was not always inherent in the subject matter. Time after time, for example, students would not follow directions (a frequent phenomenon in all instruction) and consequently would proceed through the material in almost no order, let alone a logical one; nevertheless, terminal tests indicated that they had learned" (Milton, 1972, p. 68).

That there is a movement toward competency-based degrees is evident not only in the growing interest in external degree programs but also in the fact that the Fund for Improvement of Post-Secondary Education is supporting a number of projects to develop guidelines, define content areas and objectives, and implement such programs (*Chronicle of Higher Education*, July 30, 1973). It is noteworthy that several of these projects are exploring competency-based teaching and learning in various human service occupations and professions, including nursing.

Obviously we can expect a great deal of attention to student evaluation in the foreseeable future. Unconventional learning experiences, increased student self-direction, and a variegated student body will necessitate frequent and constructive evaluation of student performance, not only as a basis for granting credit, but for feedback to the student and as an aid to teaching.

The same factors will give an increasing importance to the counseling function. It would be unrealistic to ignore the fact that many learners,

however self-starting and of whatever age, need guidance in making plans, selecting among alternatives, and moving from one part of the system to another. Kintzer's study (1973) of community college transfers concluded that by far the chief problem of these students was lack of adequate counseling at both ends, and pointed out that this conclusion was in line with several previously reported studies. Bulpitt (1973) describes quite graphically the several dilemmas of the adult learner: "In the school situation the adult self-concept can be very weak. Adults frequently lack self-confidence in their ability to achieve academically and are apologetic about having to ask questions to which they feel they should know the answers. Many are career oriented and seek immediate solutions, having less time to experiment than younger students" (p. 65). The Commission on Non-Traditional Study calls attention to the many counseling resources that already exist and urges the creation and publicizing of counseling centers whose functions would include: "referring would-be learners who know what they want to the places where they can get it; helping less confident individuals define their interest and needs; identifying sources of financial support; offering testing services; developing group counseling situations; and training counselors for individual institutions" (*Diversity*, p. 35). In the fields like nursing, where both new career options and new educational opportunities are opening up rapidly, the need for counseling services has never been greater. It seems likely that in all fields, with the variety of educational and occupational choices emerging and with the growing heterogeneity of the student body, higher education will be forced to provide counseling that is visible and available, not only for academic and career matters, but for personal problems as well. Counseling not only can assist the student; it can provide valuable feedback to the educational system for planning and program evaluation.

Planning and evaluation, in their turn, may act to diversify still further the conditions under which teaching and learning will occur. In an age of change, we will have to demand of our system of higher education a rapid response to change.

THE SUM OF ITS PARTS

Three years before the Newman Task Force criticized higher education institutions for becoming larger and, in the process, more alike, John Gardner (1968) defended them for what was really the same thing: "The critics may, if they wish, attack the American people for being so numerous and so fertile. They may, if they wish, attack society generally for holding such a liberal view concerning who should go to college. But they should not attack institutions that are simply trying to

accomplish a well-nigh impossible task the society has handed them. The institutions being scolded for largeness today are the ones that have been most responsive to the American eagerness to broaden educational opportunities" (p. 5).

Bigness was, in effect, higher education's response to change in the fifties and sixties. Though enrollments are not increasing as much as they were a few years ago and in some cases are actually declining, still the overall picture is one of growth, at least for the remainder of the seventies. It is doubtful, therefore, whether bigness will wither away appreciably. The system of higher education is responding to change in the seventies, as we have seen, by beginning a process of diversification along new lines. In this process, the nature of the system's parts will change and the relationships of the parts to each other will also change.

Levels and Programs

Sub-baccalaureate programs will become a greater part of the total system. The Carnegie Commission, in its revised enrollment projections (1973), forecasts a somewhat greater growth in occupational enrollments than in pre- or post-baccalaureate, and suggests that most of this growth will occur in community colleges. It seems reasonable to anticipate that vocational-technical programs will also grow as separate entities. A period of general financial stringency and rising tuition charges will be responsible for some of the increase in sub-baccalaureate programs; there will be students who would have gone to four-year colleges by preference and by aptitude but who cannot afford to do so. However, a great deal of the growth in vocational and technical programs will be due to the "new students in higher education"—those whose talents are less academic than motor-manipulative and interpersonal, and who seek specific career training and earlier entry into the work force (Cross, 1971).

Many of these students will seek such training outside the system, in the growing number of proprietary schools, some of them corporately owned, providing short-term training for particular occupations, such as data processing, bulldozer operation, and various health service jobs. The number of technical post-secondary schools in the proprietary sector increased from 405 in 1963 (Erickson, 1972) to 5,036 in 1971 (Kay, 1973). Glenny (1973) points out that "This rapidly growing sector of post-secondary education parallels the increases in enrollment in adult and continuing education in all types of institutions" (p. 3). No one who watches the commercials on television can doubt that the number and strength of proprietary schools continue to wax. The

extent to which proprietary schools do, or will, affect total enrollments in the system is unclear. What is clear is the desirability of effecting some kind of regular rapprochement between the proprietary schools on the one hand and colleges and universities on the other, if Americans are indeed to have the opportunity to progress educationally as far as they can and wish. The action of Congress in 1972-73 making students in proprietary institutions eligible for Basic Opportunity Grants and authorizing representation of proprietary schools on statewide "1202" planning commissions mandates at least some degree of rapprochement. It is to be hoped that, as competency-based degrees gain currency, relationships between the proprietary schools and the educational establishment will work themselves out.

While the trends in sub-baccalaureate programs seem relatively clearcut, those in bachelor's programs are ambiguous. There are reasons to believe that the bachelor's degree is declining in importance. In an era of emphasis on career education, a bachelor's degree in the liberal arts will inevitably be less and less regarded as an end in itself for social purposes as it once was. The bachelor's degree in various applied fields has been challenged by the rise of many associate degrees and by the growing importance of the master's degree for professional purposes. "It is becoming more apparent that the baccalaureate degree does not insure job entry. These skills have graduated to the advanced degree stage. A sizable gap is appearing between the skilled trades and the professions" (Martorana, 1973, p. 25).

Proposals to shorten the baccalaureate program, such as those contained in *Less Time, More Options* (1971), reflect a diminished conviction of its significance, even though they were not so intended, and a desire to see the student "get on with it," whatever "it" may be—employment or further study. It has even been suggested that the undergraduate college may go out of existence, its functions taken over by secondary schools and the graduate and professional schools (Mayhew, 1968). If the bachelor's degree has become less important, then it is certainly reasonable to suppose that the existence of separate institutions limited to that degree is threatened. Further, in view of the severe financial straits in which private four-year colleges find themselves today, it does not seem at all unlikely that their number may grow fewer, though it is hard to imagine their disappearing entirely.

Offsetting the reduction of the bachelor's degree in some fields, we note an increase in the number of bachelor's degrees "with designation," preparing for first-level professional positions, in other fields. Some additions of this nature have occurred in the last decade in fields formerly requiring the master's degree for entry into the profession

(e.g., social work, rehabilitation counseling). Others are likely to occur as new occupations and their educational preparation are upgraded (e.g., respiratory therapy, radiation therapy; cf., Hamburg, 1973). Such developments lend support to the Carnegie Commission's projection of a continued, though slowed-down, enrollment increase in the baccalaureate sector through the seventies. It would seem that conflicting forces are exerting themselves on the bachelor's degree, and it is hard to see as yet which will prove preponderant. The outcome in nursing, as in other professional fields, must in the last analysis be determined by a sober consideration of what the profession needs in its practitioners, not only in terms of know-how but also know-what.

Like sub-baccalaureate study, graduate study may show an increase in proportionate size in the system of higher education. Revised enrollment projections by the Carnegie Commission on Higher Education anticipate a 43 per cent growth during the seventies, compared to 30 per cent at the pre-baccalaureate level. However, within the broad category of graduate (which includes graduate-professional), graduate enrollments in 1970-71 showed a decline in mathematical sciences, history, philosophy, and foreign languages (*Chronicle of Higher Education*, June 18, 1973), all these being fields where the chief employment of graduates has historically been in the academic marketplace. However, an increase occurred in English and literature—a field also producing principally for academia and one which has always been oversupplied with academic talent. Increases also occurred in applied social sciences, the health professions, and business—disciplines whose graduates go into other careers than teaching. Figures for 1971-72, categorized somewhat differently, show graduate enrollments up in all areas except physical sciences, which experienced a decline (*Chronicle of Higher Education*, June 18, 1973).

A crystal ball might suggest that if enrollments develop logically, applied and professional graduate fields will continue to grow, in response to increased demands for higher level workers in such arenas as health care, human services, environmental planning, and management; whereas graduate enrollments in the liberal arts and pure sciences will decrease still further and then perhaps stabilize.

We can anticipate, then, a system of higher education in which the top tier changes shape and grows larger, the midsection changes shape and becomes somewhat compressed, and the bottom layer becomes the largest single part.

It will be noted that we have not called the latter the base. The word *base* implies foundation, basis, or groundwork and as yet the one- and two-year post-secondary programs do not have this relationship to the

next educational levels. In most institutions and most programs the first level is discrete from the baccalaureate and graduate levels. Vocational and technical curricula have been thought of as terminal. The graduate of one of them who decides he wanted a bachelor's degree in the same or a related field—computer science, for example—usually finds himself heavily penalized in terms of time and money to be spent, duplication of work and lack of prerequisites. Nor are the arts and science fields exempt from the costs of poor articulation.

The need for a well-articulated system of post-secondary education is becoming more and more apparent, especially as new sub-professional occupations evolve and are added to vocational and technical curricula. In the past decade the junior colleges have recognized and attempted to fill a need for what has been called middle-level manpower in fields where tremendous manpower shortages existed, where it is too slow and too costly to produce enough full-fledged professionals, and where there were many tasks to be done that required training but did not require sophisticated professional skills. We find examples of this development in a wide variety of fields. Nursing, clinical laboratory work, medical records, physical therapy, occupational therapy, social work, engineering, computers, and librarianship are a few examples. Administrators and instructors in these programs, those in the related professional programs, practicing professionals, and above all, graduates of the vocational and technical programs, all are finding that the lack of articulation between levels of education handicaps both sides.

As greater numbers of students enter and graduate from the vocational and technical programs and seek some means to upward mobility in their careers, pressures toward articulation are increasing. The problems in achieving articulation are complicated, involving much more than planning for instruction in skills that progress from simple to complex. It would be unrealistic to expect their solution overnight. There are those who do not believe a direct solution is possible, arguing that curricula designed as terminal do not provide sufficient educational base for proceeding directly into a baccalaureate program. Such barriers are formidable indeed. However, they are not insurmountable. We can expect a growing determination to work on solutions as attention is increasingly called to the need for articulation in various fields (Hamblen, 1973; MacDonald, 1973; Hamburg, 1973; Mase, 1973). The state systems of Florida, Georgia, Maryland, North Carolina, and Virginia—and probably other states as well—are currently working on curriculum changes and policies to facilitate transfer from community colleges to four-year institutions. State efforts will have to be joined or followed closely by painstaking efforts, field by field and

institution by institution, to work out specific curricula, redesigning where necessary. Within a few years sufficient articulation between levels may be achieved to allow a competent individual to enter the next level without penalty. Perhaps eventually a planned progression with interruptions for work experience, some of which will permit advanced standing at the next level, will be possible.

The Commission on Non-Traditional Study treats articulation as a much broader problem than the construction of a viable ladder from one level of education to another. In *Diversity by Design* the commission argues that a sound conception of articulation must be based on a life-long continuum of education. Such a continuum implies much more than the piecemeal, stop-gap kinds of offerings we often think of as adult or continuing education.

Leaving aside for the moment the educational needs of, say, an engineer who wants to learn more about classical Greece, or who in mid-career wants to become a teacher, let us apply this concept of life-long learning to the educational needs of the engineer who wants to stay out front in the practice of his profession. It has become a common rule of thumb that, because of the rapidity of technological developments, a graduate engineer obsolesces in about fifteen years. But keeping abreast of technology is not the engineer's only need for further education. He also has to cope with major changes in the parameters of his profession. Societal problems needing engineering know-how today do not lend themselves to unilateral solution by one discipline. Urban congestion, environmental deterioration, energy shortage, transportation—all such problems have multiple components that must be understood sufficiently by the engineer that he can take them into account and work with the necessary other professionals in their solution. As society's problems change, so do the educational requirements for dealing with them. It has been said that retraining engineers has not been successful, that continuing education is what is needed (Goglia 1973)—in other words, life-long education characterized by regularity and continuity.

Like the engineer, the nurse finds herself threatened by obsolescence as technological advances, new knowledge about health and disease, and changes in health care delivery modify the nature and scope of her responsibilities. New professionals and paraprofessionals in health care take over certain of her tasks and add others. Health problems predominant in society shift from those environmentally caused to those socially caused, requiring a different knowledge base for their management and a new set of professional skills and professional relationships.

What is true for engineering and nursing is true for other fields as

well. In almost any discussion of education today in any discipline, the need for continuing education occupies attention, with most professions insisting that the need is growing more and more acute. For some of the health professions, notably nursing and medicine, one hears arguments for requiring continuing education as a condition of continuing licensure. In the allied health fields, Mase (1973) predicts, "Accountability will demand much more continuing education, and because of the knowledge explosion all health workers will spend more time in keeping up with new developments and in acquiring new knowledges and skills than in getting the degree to enter into the practice of their chosen profession" (p. 8). In social work it has been estimated that an adequate continuing education program could account for at least one-fourth of the total social work program at a given institution (Levin, 1973).

Mounting pressures are having an effect, though we have a long way to go to bring some order out of the chaos that currently exists in the area of continuing education. The present non-system, in which every academic institution runs its own show in continuing education and many of the larger universities run several, cannot be anything but wasteful of resources. One promising approach is contained in 1973 legislation in Virginia, dividing the state into six continuing education regions, with the senior institution in each region given prime responsibility for co-ordinating all adult programs in its region. Private institutions can join any of the six consortia, and some have already indicated that they will do so (SREB, 1973).

In the health fields the development of the Area Health Education Center (AHEC) holds potential for providing continuing education for a range of professionals on a logical, incremental basis. In conception, an AHEC, as defined by Willard (1973), "involves a program in cities and towns some distance from, but closely affiliated with, a medical school. Such centers are usually based in a community hospital and conduct clinical training programs for . . . medical students. . . . They may sponsor and participate in educational programs in nursing and the allied health fields conducted in conjunction with the medical center or universities and junior colleges within their areas, and they provide continuing education opportunities for all of the health professionals in the region" (p. 45).

Several states—Tennessee, Kentucky, and South Carolina among them—have enacted legislation to enable the establishment of AHECs. The centers themselves, though still in their infancy, are multiplying rapidly. If viable university-agency relationships are built into their development, AHECs should constitute a vehicle for delivery of a com-

prehensive program of continuing education for the health professions.

With an integrative conception of continuing education evolving, and with concrete developments beginning to take place, continuing education bids fair to receive high priority in attention and funds and finally to achieve status in the intra-institutional pecking order. (The Colorado Commission on Higher Education has established statewide policies aimed at wiping out the invidious distinction between the on-campus and extension study and to insure extension courses of high quality.) Continuing education also promises to be an enterprise demanding systematic interinstitutional relationships.

Relating the Parts

Increasing attention to the need for interinstitutional planning and action is not limited to continuing education. Many of the developments discussed in this paper by their very nature will call for joint efforts. The wisdom of co-operative ventures becomes more apparent as the new depression continues and as, at the same time, higher education finds itself under pressure to provide a greater variety of learning opportunities.

The recent growth in consortia of colleges and universities is indicative of the need many institutions feel to have access to more resources than their own campuses and their own budgets can provide, while retaining their own autonomy. Defining "a consortium" rather loosely as "an arrangement whereby two or more institutions . . . agree to pursue between, or among, them a program for strengthening academic programs, improving administration, or providing for other special needs" (Moore 1968, p. 4), a survey by the U.S. Office of Education found there were 1,017 consortia in 1965-66. Godwin (1973) estimates that several hundred more have appeared since then. There has also been a notable growth in formally organized consortia, each administered by at least one full-time professional, each having three or more member institutions, each involving several academic programs, and all requiring annual contributions or other tangible evidence of long-term commitment of member institutions: from 31 in 1967 to 80 in 1973 (Patterson, 1973, p. v).

The potential that viable consortia offer their members is considerable:

> For one thing, they can save money through such means as avoidance of duplication in programs and facilities, cooperative management and pooling of resources for new or uncommon programs. They can provide a wider range of course offer-

> ings to students and access to unique, quality instructional programs. They can open additional research possibilities for faculty. They enable established institutions to assist developing institutions and they extend capabilities for public service and operation of enrichment programs for campus and community. Groups of institutions also have found that together they can acquire support from governmental and private sources and influence (with the same sources) not possible through unilateral effort. (Godwin, 1972, p. 6)

This is not to say there are no drawbacks; there often are, of course, including failures of communication and differences in perspectives or objectives. However, colleges and universities appear to be seeing more to be gained than to be lost as voluntary co-operative efforts multiply. Thus, in an article entitled "Consortia—A Partial Answer to Short Funds," the *Report on International Education* (1973) states, "One of the most conspicuous developments in higher education over the past decade has been the slow, steady growth of consortia. In the face of very real financial constraints, institutions have shown an increasing interest in, if not total enthusiasm for, the cooperative method of continuing threatened programs and of establishing new programs at the least possible cost" (p. 1).

Mandated interinstitutional planning is also increasing via the continuing growth of statewide co-ordinating agencies for higher education. They now number 45, with exploration toward creating some kind of state-level body in most of the remaining states. Though they vary in structure and power, all such state agencies have the general objective of promoting orderly development of the fast-growing public sector and seeing that the state's needs for higher education are provided for. A criticism is sometimes heard that, far from preventing unnecessary duplication within a state's total educational programming, state agencies have in effect encouraged it: If the agency approved a new program for University A, it often found itself in the position of being accused of favoritism unless it allowed University B to establish a parallel program. This criticism may well have been valid in the sixties, when there seemed to be no ceiling on the expansion of higher education. Now, however, many state agencies for higher education are working on long-range master plans for their states; in some states moratoria on new programs have been in effect for two or three years; and several have begun to look at programs producing few graduates, with a view to cutting down. State higher education and legislative reports reflect heightened interest on the part of government in the

planning and controlling potential of state co-ordinating boards. It is hardly necessary to point out that, as formerly private institutions continue to move toward public support and public control, statewide co-ordination becomes more urgent.

Pursuant to the recommendations of the National Commission for the Study of Nursing and Nursing Education, a number of states have established or are in process of establishing State Master Planning Committees for nursing education (Lysaught, 1973). The National Commission urged that the master planning committee "take nursing education under its purview, . . . to recommend guidelines, means for implementation, and deadlines to ensure that nursing education is positioned in the mainstream of American education patterns" (p. 149). It is greatly to be hoped that these committees will make certain they have official liasion with their state higher education co-ordinating agencies. A position in the mainstream of American educational patterns is increasingly going to mean being part of a much larger whole, with planning and funding considered in the context of the varied educational needs and finite resources of an entire state.

Regional compact agencies are feeling the effects of both the institutions' interest in voluntary co-operation and the states' interest in comprehensive planning. The regional agencies—the Southern Regional Education Board, the Western Interstate Commission for Higher Education, and the New England Board of Higher Education—though supported principally by the participating states, operate through persuasion, as they have no coercive power over the institutions with whom they work. They can and do facilitate interstate and interinstitutional planning in a regional context, with the net effect of a better utilization of existing resources and strengthening of needed programs. Regional agencies were established in the late forties and early fifties as mechanisms to enable interstate sharing of limited higher education resources. At the same time, the long view of regional co-operation comprehended a system of voluntary participation in eliminating unnecessary duplication and assuring availability of a full complement of educational programs in the region as a whole. During the fifties and sixties increasing popular and governmental support for higher education enabled individual states to move toward educational self-sufficiency. The present financial crunch has motivated both states and institutions to take a new look at the possibilities inherent in regional planning and co-operation. SREB, for example, has received numerous specific inquiries about the feasibility of regional action in various fields, and has taken steps to implement additional kinds of interstate and interinstitutional arrangements.

Communication, sharing of information, and sharing of costly services will be facilitated as groups of institutions are joined together in the operation of computer networks. New Jersey has recently implemented a statewide educational computer network, and several other states have plans in this direction. Technology, as well as finances and new demands, will act to bring institutions closer together in fact and in deed.

Assuming that the trends in interinstitutional co-operation, in statewide planning, and in regional development continue for ten or even five years at their present rate, the big picture in higher education could change in a relatively short time from one of unequal proliferation to one of reasoned growth. A greater spectrum of academic resources will be available to an individual student, and the nation's needs for educated manpower will be more evenly met.

The possibility of more realistic manpower development becomes still more probable through another trend toward co-operation—that of academic institutions with governmental agencies and with businesses. The growth of co-operative education and experiential learning programs would in itself augment a trend toward university-agency arrangements. The current movement for academic institutions to reach out into the larger community for new resources for teaching and learning, as in the University Without Walls and the Minnesota Metropolitan State College; the rapid increase in career-oriented curricula, such as the mushrooming allied health fields, in which some sort of practicums are needed; the development of area health education centers, where a cluster of community agencies and hospitals affiliate with an academic medical center for mutual education and service functions; competency-based degrees which may eventuate in standardization of academic recognition of certain types of work experience in certain places; growth of proprietary schools and of in-house teaching programs administered by business and industry: all these developments augur closer relationships between academic institutions on the one hand and government and business on the other. Closer relationships may mean dialogue and informal interchange some of the time but will also mean more formal co-operative relationships for many purposes.

More frequent and more binding ties between education and the outside world should, one hopes, produce good for both and, above all, for the students, who must fit into both worlds.

DIVERSITY AT THE TOP

To be fair, it must be recognized that, though pockets of ivy-covered

isolationism persist and probably always will, higher education in the main not only is in contact with the outside world, it is part of it. "No longer isolated from mundane society, called upon to staff greatly expanded industrial and governmental activities in a variety of areas, and encouraged to probe systematically the frontiers of both knowledge and practice in a host of fields, the contemporary university is far different from its predecessor of a generation ago. The difference is most marked in the graduate education and research functions of the university" (Cartter, 1968, p. 255).

Because of its pivotal role in the work of society, the graduate sector of higher education merits a closer look in the light of the major trends described in previous pages. To what extent and in what ways is diversification overtaking this historically least diverse structure?

Transmutation of Aims

Many of the trends described elsewhere in this paper manifest a zeitgeist that becomes more and more perceptible as the seventies progress; that is, a leaning toward career preparation and away from the acquisition of knowledge for its own sake; a belief that education ought to prepare the student for something more specific than "life" or "citizenship" or even "scholarship." Competency-based learning, academic credit for work experience, multiplication of technical programs, deemphasis of the bachelor's degree, recognition of the need for continuing education—all these developments express a growing propensity toward skilled action, a "career orientation." At the graduate level the issue goes beyond that of providing the individual with a marketable competence and involves the needs of society for a working hegemony that is at once broadly knowledgeable and highly skilled.

The conviction that graduate education bears a responsibility in solving societal problems is implicit in the final report of the Council of Graduate Schools' Panel on Alternate Approaches to Graduate Education (1973): "A sound approach to change in graduate education will reflect . . . concern with how to make knowledge a more effective resource for meeting social needs. . . . The cause of advanced knowledge cannot finally be separated from that of human aspiration generally" (p. 31). Kidd (1974), in an article comparing ten major reports on graduate education (including that of the panel) coming out during the period 1968-73, expresses dissatisfaction with their lack of attention to preparation for socially useful professional careers. Arguing that the objectives and role of graduate education should be more intensively debated, he adds, "We should give higher priorities to training specialists not only for industry but for significant social service careers—

including health care, social work, and public administration. Means should also be sought to help those students who will follow academic careers to become better teachers" (p. 50).

Dr. Kidd's concern is in itself an indication that the debate exists. If it is not yet sufficiently intense in the right quarters—namely, within the graduate schools themselves—one can assume that it will become so in the foreseeable future, given a continuing climate of professionalism and no let-up in either the complexity or the urgency of such social problems as health care, management of the environment, transportation, and personal and national tensions.

Toward Diversity in the Doctorate

Debate about the nature and aims of graduate education is not new, of course. The storm center is now, as it has always been, the doctorate. Today the dominant question is whether the degree should continue to adhere to the same pattern as the traditional disciplinary research Ph.D., or whether divergence should be encouraged so as to prepare arts and sciences candidates more effectively for college teaching and professional candidates for advanced practice and leadership.

A number of professions, of course, have long since established doctorates of their own designation and prescription, such as the Doctor of Social Work and the Doctor of Education. As long ago as 1962 Chase found that 197 institutions offered 36 different kinds of doctors' degrees (not including first-professional degrees such as M.D.). It is no secret that many of them are generally regarded as second-class degrees, others as esoteric. Ideally, at least, such professional doctorates are tailored more closely to the needs of the profession for particular kinds of expertise, and their differences from the traditional Ph.D. may therefore be perceived as differences in kind rather than in rigor. In any case, comparisons are hazardous because, as Ashton (1965) points out, there are variations in requirements from institution to institution for any doctorate, including the Ph.D.

The diversity represented by the number of non-Ph.D. doctorates available is more apparent than real, when numbers of degrees awarded are placed in the picture. Chase reported that in 1962 83.3 per cent of the doctorates awarded were Ph.D.s; the Ed.D. accounted for 11.2 per cent, D.Sc. 1 per cent, Th.D. 0.1 per cent, and the 32 other doctor's degrees less than one-tenth of 1 per cent each. Recent figures are not available (U.S. Office of Education reports on *Earned Degrees Conferred* do not break down the doctoral category); but, in view of the heavy demands by industry and government in the fifties and sixties for research and

for personnel with research capability, it seems likely that the Ph.D. has probably gained, if anything.

The unquestionable ascendancy of the Ph.D. as the culminative degree means that it is the recognized model. Other doctorates are assessed for respectability according to how closely their requirements parallel those of the Doctor of Philosophy, regardless of how well they fit the nature of the theory, practice, and investigative needs of the profession concerned. Mayhew warns, "If the Ph.D. degree . . . is held as a model toward which the doctoral degrees in professional fields should move, the needs of further practitioners will very likely be ignored or overlooked" (1972, p. 25).

One has only to review the recent vicissitudes of clinical psychology in the graduate school to appreciate the validity of this caution. When post-World War II demand for clinical psychologists prompted the National Institute of Mental Health to make program support and student stipends available, many universities established or expanded this hitherto underdeveloped specialty in departments of psychology. Enrollments grew rapidly and Ph.D. graduates were in great demand—not only for clinical positions, but also to fill university needs for faculty. By the seventies academic departments of psychology were limiting stringently the number of applicants they would accept (for example, in 1972 one department in the South reported having ten vacancies for over two hundred applicants), and their graduates, trained as academicians and researchers, were chiefly seeking academic and research positions in universities, with the need for practitioners still largely unmet. The situation has prompted some observers to advocate creation of a Doctorate in Clinical Psychology (cf. Mase, 1973). One institution, the University of Illinois, has established such a program and reports a lively demand for its graduates.

The traditional Ph.D. has withstood many decades of attack, and it would be reckless to intimate that its days are numbered—nor would one wish to do so. The things it stands for at its best—creative scholarship and research—are needed today no less than in the past. As Storr suggests, "The critically important task is not to destroy a monopoly held by an arbitrary exercise of power, . . . but rather to ensure that the influence of the Ph.D. . . . does not make balanced response to the just claims upon the graduate school impossible" (1973, p. 67). What we are predicting is that the pressure of "just claims," i.e., society's needs for working professionals of the highest order, will progressively force a "balanced response" in the form of doctorates better conceived to prepare such people.

The shortcomings of the traditional Ph.D. for professional purposes

are underlined by its limitations for appropriate preparation of college teaching personnel (also a professional purpose, as is increasingly being recognized). The problem became egregiously visible in the fifties and sixties with their tremendously increased demands for college teachers to deal with multiplied enrollments and greatly expanded programs. Objections to the Ph.D. as a teaching degree have been discussed at length elsewhere (cf., for example, Berelson, 1960; Prior, in Walters, 1965; Heiss, 1970; Dunham, 1970; and numerous *Proceedings* of the Association of American Universities and the Association of Graduate Schools); they need not be rehearsed here. Proposed remedies have been almost equally numerous, including a two-year Master of Philosophy degree, an intermediate degree between the master's and the doctorate, and a special doctorate.

Solutions involving less-than-doctoral degrees have fallen by the wayside. The end of the sixties saw the initiation of a doctor of arts degree for college teacher preparation.* As conceived, this doctorate would provide greater breadth of disciplinary preparation, a sequence in Education, a different type of dissertation, and supervised and evaluated teaching experience (Dressel and Thompson, 1974). Whether or not the D.A. will survive the seventies is anybody's guess. Koenker reported in 1972 that the number of institutions offering, planning to offer, or considering the possibility of offering the D.A. degree decreased from 87 in 1971 to 60 in 1972. He also complained that many of those purporting to offer it made the claim simply on the basis of requiring a teaching experience, rather than providing a genuinely revised doctoral program. It seems likely that state moratoria on new doctoral programs are playing at least as great a role as academic conservatism in this early decline, if that is indeed what is going on. The situation may simply be, as Dressel and Thompson say, that "Acceptance of the need for a teaching degree has been long in coming and only a second or third generation may bring it to fruition" (p. 130).

At any rate, the movement continues toward a redefinition of the doctorate to make it more flexible and more responsive to society's needs for a broader spectrum of highly developed competencies. We can anticipate that this movement will gain momentum in the next few years.

—A definite shift is taking place from academic to professional in the fields in which earned doctorates are being awarded. Of total doctorates conferred in 1961-62, 62 per cent were in fields that can be

*Some institutions have made the same type of program available in the Ed.D.—and in a few cases the Ph.D.—rather than add new nomenclature.

categorized as clearly academic, 38 per cent clearly professional; by 1971-72 these percentages had moved to 58 per cent academic and 42 per cent professional, and projections for 1981-82 predict 54 per cent and 46 per cent respectively (cf. Simon and Frankel, 1973). As the professional fields grow as a proportion of the total, their bargaining power to assert their own needs will also grow.

—The research competence and interest produced in the traditional Ph.D. program will have less ready salability in a period of reduced research funds and an academic marketplace where expansion is limited almost entirely to the two-year colleges (where research orientation is more of a detriment than an asset in the classroom—cf. *Chronicle of Higher Education*, January 24, 1972).

Of late the suggestion is frequently advanced that the needs for more varied preparation at the highest level be supplied by offering alternative "tracks" in the Ph.D. program. Mayhew's proposal (1972) is perhaps the most fully developed along these lines. He recommends a four-year post-baccalaureate program, with branching (beginning principally in the third year) into three possible avenues: research, teaching, and application. The nature of the dissertation would be somewhat different for each track.

The issue is not whether the doctorate will diversify. It has already done so, and will almost certainly continue to in even more fundamental ways. The issue is rather one of how the essential diversification will be structured, designated, recognized, and thus "blessed."

Trends pressing toward a well-conceived diversity in the doctorate ought to serve as encouragement for nursing to proceed with all deliberate speed to establish additional doctoral programs of its own—programs that will be responsive to the profession's needs for teachers, researchers, advanced clinicians, and administrators. As of 1973 there were only six doctoral programs in nursing in the nation. In all, only one-tenth of 1 per cent of nurses hold a doctorate—most of them in other fields, since the nursing doctorate *per se* is a relatively recent addition. It has been suggested that this figure should be at least 1 per cent to provide the leadership personnel needed for teaching, administration, and research (cf. Garrison *et al.*, 1973). Surely this does not seem an unreasonable ambition. Perhaps the percentage should be greater in view of the emerging need for clinical practitioners at the highest level. The challenge will consist in designing programs that collectively incorporate sufficient flexibility to allow for different emphases. For those present nurse leaders who espouse most warmly the cause of enlarging the body of nursing research, the temptation to

advocate a predominantly research-oriented doctorate will be strong; but perhaps the profession as a whole would be better served if nursing added its weight to the impending move toward providing options.

The Multiform Master's

In contrast to the doctorate, long characterized by a prevailing uniformity, the master's degree is already so diverse that it is almost impossible to discuss it as a single phenomenon. In 1963-64, 602 colleges and universities awarded 328 differently designated master's degrees to 99,046 candidates (Chase and Breznay, 1965). The number of different degrees available may well have increased in the intervening decade with the emergence of new professions. The universe of master's degree programs comprehends a tremendous range of requirements. Residence requirements, for example, vary from sixteen weeks to two years (Snell, in Walters, 1965). Some require a thesis while others do not. Some require a foreign language, others a competence in statistics, still others a "smorgasbord" introduction to one or more research methods, and some require no research tools of any kind.

Variations in requirements reflect differences in purposes. In the arts and sciences fields the master's degree is apt to be conceived as either a mini-doctorate, or a way-station to (and proving-ground for) the doctorate, or a consolation prize for candidates deemed "not doctoral material." All these concepts of the degree may be found operative in different departments in the same university. In the professional fields, the master's degree has retained a more positive image of its own, having a recognized place in the professional hierarchy and a recognized market value. No doubt it was the relatively healthy reputation of the professional master's degree that prompted Berelson to state that the master's "has become associated with professional practice rather than academic scholarship" (1960, p. 187).

Having said that the professional master's is stronger as an entity than the academic master's, one is hard put to it to make further generalizations. Studies of professional education have not undertaken across-the-board analysis of the master's step on the ladder of professional preparation. The seemingly infinite diversity in program patterns constitutes a deterrent to analysis and synthesis. As Snell says, "Even among the professional degree programs there is great heterogeneity. One of the few generalizations possible is that several of the professional degrees commonly and explicitly require two years of graduate study" (p. 87). True enough; social work, rehabilitation counseling, and nursing are three such that come to mind. Engineering and fine arts explicitly require two years for the master's in many institutions, but by

no means in all. And so it goes. Further, what may have been correctly said categorically ten years ago is now changing. The development of strong undergraduate concentrations in social work, for example, which has occurred in the past decade has led to the shortening of the social work master's to one year for those students entering with undergraduate majors in the field.

The issue of the time requirement is especially pertinent to nursing, since the two-year requirement for the master's degree in this profession has been questioned by the National Commission for the Study of Nursing and Nursing Education (Lysaught, 1973). The Commission expressed the suspicion that the two-year requirement has been, at least in part, due to nursing's "zeal to be 'purer than Caesar's wife' " (p. 170), which in turn is due to its relatively low position in the university's informal hierarchy of intra-institutional prestige. Thus Mayhew (1971) describes "a definite hierarchy of professional schools" where "medicine and law presume themselves to be the aristocrats while education, nursing and home economics are pure plebeian" (p. 14). Since the "plebeian" group consists of professions predominantly female, one might hopefully hypothesize that the hierarchy may change with the changing status of women. In any event, there is no time like the present for nursing, or any other profession, to review what should be expected of a master's degree and how long it need take to provide it.

Diversified Opportunities for Graduate Study

Length of time is not the only aspect of graduate study that society is challenging today. While it cannot yet be said that instances are proliferating, there are indications of at least a loosening of some of the constraints of time and place that have characterized graduate study in the recent past. The following might be called straws in the wind:

—The University of California offers nineteen part-time bachelor's and master's programs from eight campuses (*Chronicle of Higher Education*, November 26, 1973).

—The Union for Experimenting Colleges and Universities has established a Union Graduate School which employs a University Without Walls concept in offering doctorates using individually designed programs and self-directed study conducted with minimal guidance from adjunct professors in institutions located where the student is.

—Enrollment in the graduate extension program offered by the University of Oklahoma is up from 1300 in 1972 to 2000 in 1973-74 (Ricklefs, 1974).

—West Virginia has established a graduate center in Charleston (the state's major metropolitan area, approximately 130 mountainous miles from West Virginia University in Morgantown), which offers master's degrees in several fields and currently enrolls some 2000 students (SREB, 1973).

—An external degree program leading to a master's in public administration is offered by California State College, Fullerton (AACSU, 1972).

Apparently there is demand for formal post-baccalaureate study on the part of a constituency whose members are working and want not only additional credentials but time-and-place accommodation in acquiring them. This conclusion gains support from a recent study on part-time students by the American Council on Education (reported in the *Chronicle of Higher Education*, July 7, 1974): Among graduate students the percentage of part-timers increased from just under 50 in 1967 to 63 in 1972. This rise in percentage reflects the drying up of many governmental sources of fellowship support and the consequent necessity for college graduates to go to work, as well as the aspirations of working professionals to advance or simply to keep up, and the necessity for both groups to pursue further studies on a part-time basis. It seems likely that universities, responding to these needs and further impelled by the desire to maintain enrollments, will find more ways to make it possible for them to do so.

The recently established Academic Common Market in the South constitutes one such additional avenue. The common market consists in an interstate agreement to pool selected graduate programs, opening them to students from all states in the agreement without charging out-of-state tuition. By having available, at reasonable cost, programs not offered in his home state, a student's opportunity for graduate education is substantially increased. The twelve states participating in the common market have placed in the pool more than a hundred "uncommon" graduate programs offered in thirty-one universities (SREB, 1974).

The Academic Common Market eliminates the need for every state to offer a full complement of graduate programs in all fields. This should lead to a better allocation of intrastate resources and a consequent strengthening of well-established programs.

To paraphrase Bacon, if prosperity was the blessing of the sixties in higher education, diversity is the blessing of the seventies. The educational climate has never been more favorable to change calculated

to further education's role in promoting the social good. Each discipline and each profession has its contribution to make to society. In the atmosphere now prevailing, each has an obligation to design educational programs and provide educational opportunities that will enable these contributions to come to fruition.

WORKING PAPER THREE

The Immediate Environment of Nursing: The Changing Health Care System

DEFINITION OF THE HEALTH CARE SYSTEM

The discussion of the health care system must begin with a set of basic definitions. Definitions, as obvious as they sometimes seem to be, allow for better communication of ideas and concepts; moreover, they are a part of the premises or basic assumptions, which are an integral part of a theoretical framework for a nursing curriculum. The definitions are not operational ones, as might be required for a research endeavor, but rather theoretical ones intended to convey a general overriding view of the health care system as it is today and as it will be in the future. The overall matrix of systems theory has been chosen to express the ideas, not because of the belief that all nursing curricula should be predicated upon that base, but because the holistic notions of systems theory lend themselves best to describing dynamic systems in ever-changing environmental settings: a phenomenon of contemporary life.

The System As a Whole

The word *system* in the phrase *health care system* is to be taken very seriously; it is intended as the systems theorist would define it: something complex, having many parts which interact and interrelate in complex ways. A system, then, to be fully understood, must be described both in terms of its structure and its process, its form and its history; and, unless it is a closed system, it is moreover not fully understood until its interactions and interrelationships with its environment are described. (The assumptions underlying these concepts are described in the section on pp. 7-13, above.)

The first element in the definition of the health care system must be, then, that it is a subsystem of the larger social system, an open or living system in constant process of exchange with its environment. It is because of this interaction that many writers say, like Haynes (1972): "Any health care system is itself a sub-set of a broader social system and to a greater or lesser degree reflects the social system of which it is a part" (p. 13).

Haynes further defines the health care system as a set of service components "organized, coordinated and construed to achieve certain

goals. These components of service result from a combination of human, physical, and fiscal resources that are mobilized within certain constraints" (p. 13).

The goals of the health care system are not as easy to delineate as it might first appear. One reason is that they operate on many hierarchical levels at once. Another is that there are numbers of them, and they change as the larger society's values change. As Haynes points out, "in an ideal world, the goals of the social system would be clearly defined, and the goals of the health care system would be a sub-set of those goals" (p. 13). But events in the real world are not that clear-cut, and they do not occur in neatly sequential patterns. Instead, the simultaneous interaction of many variables, each one pulled by social forces that may or may not work in different directions, control the course of events.

For all that, certain assumptions about the goals of the health care system can be made. First, and most practically, the primary goal of the system is to preserve and maintain life, to prevent or mitigate the destructive effects of disease, malfunction, and disorder. The goal is focused on the individual, but clearly, society as a whole gains much from a system that protects the security and integrity of its members. Closely allied with the primary goal is that of improving the quality of life, again of the individual and of society as a whole. The second goal—improving life's quality—is interrelated with the first—preserving and maintaining life.

From this point of view, the health care system's global goals can be thought to fall into two categories: the first consists of those goals for which it bears primary if not truly exclusive responsibility (for example, treatment of acute episodes of illness, management of trauma, prevention of disease) and the second consists of the goals it shares with other systems in society (for example, health education, the detection of certain diseases, control of criminally deviant behavior).

At a very fundamental level, the health care system can be seen as an expression of some of society's most profound values; its activities embody society's convictions about being human, caring, and interdependent. The manner in which it preserves life and prevents disease, the distribution of its services among social groups, these and many other variables reveal much about what individuals, communities, and even larger groups truly value. Clearly, as social issues change, so do values, so does the health care system, precisely because it is an open system and a reflection of the surrounding system of which it is a part.

The health care system can be defined in terms of its goals, which are future-oriented, but it can also be defined in terms of its past

history: it is a repository of health technology and science, a collection of applied sciences and knowledge bases which have accumulated over the years, undergoing a constant process of refinement and correction as new experiences shed new light on old problems. Seen this way, the system is one of several mechanisms by which society protects and preserves its very being.

Health

Society's perception of what it is to be healthy changes every time its ability to intervene successfully in disease or dysfunction improves. As we become more scientifically and technologically able, people's expectations change about health care, sometimes changing so much that hopes are raised too high, creating the problem of dealing with expectations that cures and miracles can be performed which are in fact beyond reach. It is futile to define health as the absence of specific diseases, a list that must be constantly modified, and it is unrealistic, and an oversimplification, to define health simply as the absence of all disease; moreover, the definition should not be utopian or a product of wishful thinking. A useful definition of health must survive repeated changes and advances in health care; and in addition, it should describe a positive condition, something that can be achieved.

Health may be defined as a dynamic, not a static state. Good health is the result of an individual's successful adaptation to both internal and external conditions, resulting in his possessing a reasonable degree of freedom from pain, discomfort, or dysfunction. The individual enjoying good health feels himself to be in a state of both emotional and physical well-being, and sees himself as being able to function effectively. Such effective functioning takes place in a context of human relationships; thus, an individual's health is determined partly by the nature of his family and social relationships.

Americans have generally come to believe that such a condition of good health is the right of every individual human being without regard to economic and social status.

The community as well as the individual can be seen as enjoying good or poor health. In fact, one expects that a healthy community or region is requisite to a healthy individual. Clearly one of the clients of the future health care system must be said to be the community and, even more encompassing, the state or the region. An increasingly ecological approach to health care will be required if good health is to be enjoyed by the many.

Categories of Health Care

The ways health care activities are grouped, or categories of health care, have been defined differently from one health field to another, and confusion has been the result. So that such confusion could be dissipated, the terms *primary*, *secondary*, and *tertiary* care have been carefully defined for the purpose of the curriculum project.*

Primary care has two dimensions. First the term designates the client's life-long or basic point of contact with the health care system. At the very least, this includes a person's first contact with the system in any given episode of illness. It also includes the individual's long-term enrollment in and continuous interface with the system: the continuous monitoring of his state of health. The second dimension of primary care is the system's responsibility for the whole continuum of care, that is, for the maintenance of health, including not only preventive services, but also the evaluation and management of new symptoms, the appropriate referrals, and the long-term management of chronic illness.**

Secondary and tertiary care are more closely associated with and dependent upon the hospital. Both types are usually direct responses to single episodes of ill health; both usually take the form of isolated incidents in a client's life. Secondary and tertiary care are distinguished from each other chiefly by the degree of complexity or rarity of the disease involved. Secondary care is more routine, more simple, and geographically more widely distributed; health personnel involved in dispensing secondary care are often less highly specialized than those involved in providing tertiary care. Tertiary care, on the other hand, is concerned with rarer, more complex health problems and often takes experimental form. It is in the area of tertiary care that most current clinical research is carried on. Tertiary care facilities are less widely distributed than secondary care facilities and most often are located at a university or research institution.

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*Many readers will ask why other terms that are commonly seen in the literature, especially in nursing, have not been used. The terms *episodic* and *distributive* care, used by the National Commission for the Study of Nursing and Nursing Education, for example, can be quite useful. The decision to use another set of terms is based on the fact that many writers concerned with the future of the health delivery system develop their models using the terms *primary*, *secondary*, and *tertiary*. The fact that detailed definitions are needed, despite the fact that the terms selected are found more frequently than others, only underlines our assertion that confusion in matters like this prevails.

**The staff would like to thank the following seminar members for their assistance in the preparation of this definition: Ms. Rose Foster, Ms. Virginia Phillips, Dr. Kenneth Roberts, Ms. Nancy Strand, and Dr. Shirley Thompson. The definition is based quite directly on the definition of primary care found on p. 8 of *Extending the Scope of Nursing Practice* (1971).

In a recent issue of *Scientific American* White (1973) presents a graphic analysis of primary, secondary, and tertiary care categories by indicating the relative importance in each category of such variables as site of care, referral pattern, orientation, and the like. (See Figure 1 for a chart based on White's illustrations of these concepts.)

Direct access, for example, is the referral pattern that is most common in primary care. Direct access is less often seen in the secondary care category, and is nearly absent in tertiary care. Or, put another way, referral practice is characteristic of tertiary care, less so of secondary care, and quite uncommon in primary care. From the client's point of view, this means simply that if he has gained direct access to the care he receives, it is likely that the care he is receiving falls into the primary category; if, however, he must be referred by one health practitioner to another in order to receive the care, it is likely that the care is secondary or tertiary.

Or, to take another example from White's chart, the function he calls "orientation" (a better term might be *goal* or *purpose*): prevention and health maintenance are crucial in primary care, much less so in secondary care, and are not at all one of the purposes of tertiary care. Early diagnosis and disability containment are moderately and equally prominent in primary and secondary care and are not as prominent in tertiary care. Finally, palliation and rehabilitation are mildly important goals in primary care, more important in secondary care, and much more important in tertiary care.

The greatest value of White's chart is that it brings home the point that the distinctions between these three kinds of care are not simple either-or ones but instead are matters of gradations of importance or degree. It is important to point out that simplistic definitions can be very misleading. For example, it would be a mistake to associate tertiary care exclusively with university medical centers, or to assume that primary care is never extended in a hospital setting. And many a clinician would be quick to point out that two and maybe even sometimes three of the categories of care can coincide in the case of a single client.

The Client

The word *patient* is the one that comes most easily to the tongue; it is by far the most commonly used term. The possessive mode—"my patient"—so common despite the fact that it is sometimes resented, expresses a depth of caring or commitment by the professional that is valuable. But *patient* carries for many the connotation of someone who is ill, despite the fact that Webster's *New Collegiate Dictionary* (1973) defines the patient simply as "an individual awaiting or under medical

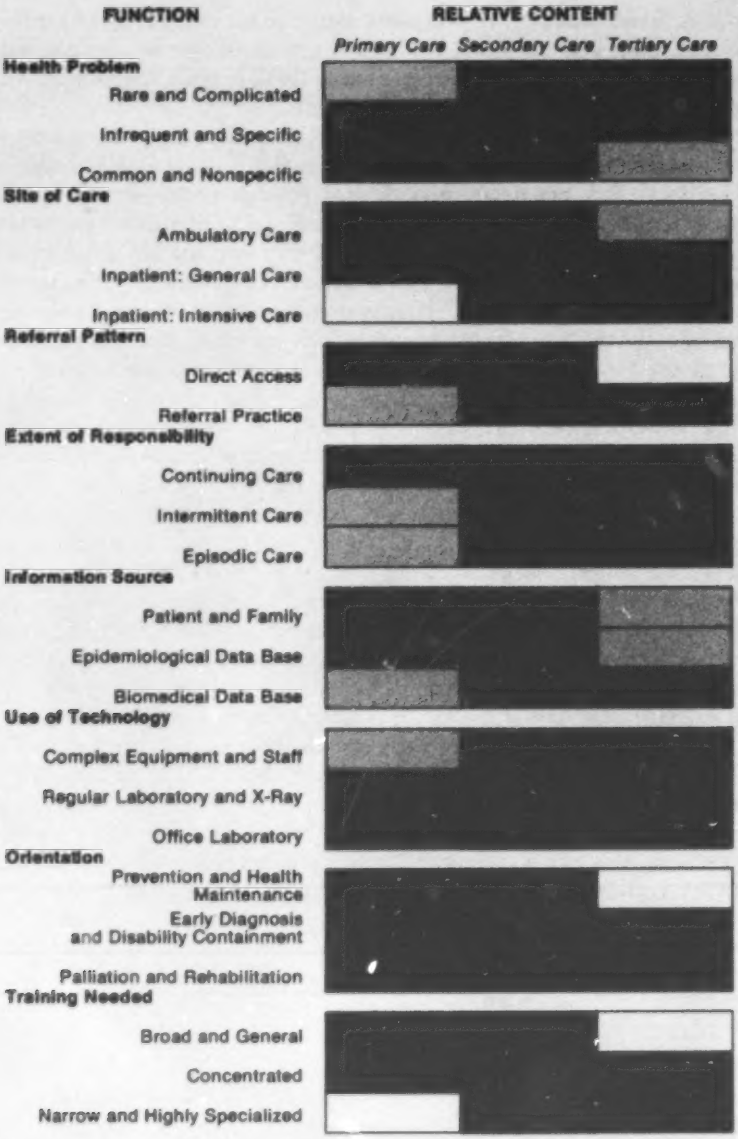

Figure 1. Redrawn from illustration entitled "Levels of Medical Care" on p. 33 of White (1973). The darker the shading, the more important the level of care is to the corresponding function.

care and treatment . . . the recipient of any of various personal services . . . one that is acted upon." Perhaps the emphasis on the patient's passivity in this definition is the reason for a certain uneasiness with the word.

Health leaders and writers have turned increasingly to the word *client*, hoping by the use of this word to make it clear that the user of health services is not necessarily ill or in need of treatment, though he *is* in need of health services. *Client* is defined in the dictionary as "a person under the protection of another . . . who engages the professional advice or services of another . . . a person served by or utilizing the services of a social agency." It is a definition that works far better, given the definitions of health and health care and the concern that much more than episodes of illness are understood to be part and parcel of the health care system.

The definition also expresses the conviction that the person using the health care system should be seen in the active as well as the passive mode, as a user of a system, however dependent upon it he might be, and as a participant in his own care whenever possible, and not as a simple receiver of services. Thus, the word *client* has been chosen for specific and important reasons.

But the dictionary fails on the remaining point: the client is singular in definition. But the client's health, according to systems theory, is contextual; the client is a member of many groups—family, neighborhood, community—which determine his health in part. Moreover, each individual client is also, as an individual or as a member of a group, part of the context that determines the health of other clients. As the system tends to the needs of one client it is of necessity tending to the needs of other clients as well. The client and his family are cared for, as are the client and his community, and in some instances, groups and not individuals are the clients receiving care. The client is never utterly singular as if in a vacuum; he is always engaged in reciprocal relationships with his family, his community, and his society.

Furthermore, groups—families, neighborhoods, communities of various sorts and sizes—are perceived as being able to enjoy good health or suffer ill health, just as individuals can. The point may appear simple but in reality carries many important ramifications for the evolving system of health care. Just how important will emerge more clearly as the details of coming changes in the health care system are discussed later in the chapter.

A SYSTEMS APPROACH TO THE FUTURE OF HEALTH CARE

The systems theory approach is one that views the health care system

as having both process and structure and as existing within the context of an even larger system. Those who write about the health system differ as to which aspects should be emphasized; some are concerned with the future of health care in terms of the effect its context will have on it—that is, its future as a subsystem in a larger, encompassing system; some explore the future of health care primarily in terms of its future structure; some examine the health care system in terms of its processes; and a few discuss the system with attention to both its structure and its process. We review here examples of each of these approaches.

The Health System in Context

Long-Range Futures That are Health-Related. The Department of Health, Education and Welfare asked the Center for the Study of Democratic Institutions to analyze the long-range social futures that will affect the delivery of health care, and in 1973, Sisson published some conclusions reached by researchers in that effort. In the introduction to a list of predictions the author points out that the Center's task was an enormously complex one, as almost all social futures relate in some way to health and health care. Sisson's published conclusions and abbreviated report are based on the ideas of different contributors working under the direction of Harvey Wheeler and R. J. Carlson.

Some of the predictions will have great impact for those planning curricular change. As an example, it is predicted that the birth rate will continue to decline in this country, meaning that "few couples will have more than two children and many will have none." As a result the youth base of the population will shrink. Shortly after the turn of the next century "fifty per cent of the people in the United States may be over the age of fifty and nearly one-third . . . could be sixty-five or older." The concept of family planning will enlarge to encompass the long-term well-being of each family member at all stages of life. A reversal of values concerning age will cause a return to a feeling of respect for the older individual. Certainly the "quality of public services will deteriorate if the talents of the elderly are not utilized." However the shift in psychosocial focus may occur, the issue has not only long-term implications but some that may materialize in the immediate future as well.

Another group of developments that could mean drastic change in the health system includes diagnosis by amniocentesis, which Sisson says "might facilitate effective treatment of the genetically defective." The development of techniques that would allow the prevention or cure *in utero* of most if not all genetic defects—some forms of mental retardation, hemophilia, sickle cell anemia, to name only a few—could mean

the virtual disappearance of many health jobs, many care and maintenance institutions, many social and education services, and even entire practice subspecialties for health professionals.

The staff at the Center asserts that by the year 2000 "the manufacturing of products will occupy the energies of not much more than ten per cent of the available labor force." Increasing numbers of people will be occupied in service activities and will have much more leisure time at their disposal. The vision of a nation made up of sedentary workers, or a people at work only a small portion of each week, suggests problems for primary health care only barely comprehended today.

The Sisson report, like almost every other analysis of the future, indicates that the so-called computer revolution will affect health care in fundamental and comprehensive ways, just as it will affect all systems in society. There is no debate among futurists on this point. But, perhaps, precisely because its effects will be so fundamental, it is hard to realize just how the computer revolution will change our day-to-day lives. One prediction is that increased use of computers will emphasize the technical aspects of diagnosis and treatment to the further demise of the more humane. On the other hand, the opposite effect may be occasioned. Certainly the use of the computer in primary care for large populations has already been beneficially demonstrated. Another assertion is made that the "intensive use of the computer will facilitate the evolution of larger and more complex units for the administration of health care but smaller units for its delivery." The operating units of computerized organizations will tend to become debureaucratized. "At the same time that they shrink in size through a reduction of their formalistic superstructures, authority will become more centralized and overall size of operation will increase." The second prediction is precisely complementary to the first, that health care administration will evolve into larger and more complex units while delivery is offered in ever smaller units. Computers will also "enhance the manipulative power of the establishment." Society will be "much more intensively planned, and our adjudication system will have to change to accommodate this factor, incorporating preventive measures allowing society to anticipate problems and develop responses."

On the one hand, computers could be one means by which the system is humanized because computers may perform many of those tasks that take the provider of care away from the patient; thus they may return the human provider to the client's side. On the other hand, computers could be the means by which the system is streamlined at the cost of personal and direct forms of health care.

Because the rise of the computer is one development that will touch

and change health care delivery at every level, specific possibilities for future health uses of computers and computer science are referred to frequently; the Sisson predictions are examples of some of the truly revolutionary changes that are impending in health care. But they do not represent straight lines forward into the future; rather, these most revolutionary possibilities are characterized by the fact that they increase the number of alternative courses that could be traveled into the future and increase the burden of responsibility to make choices and make them well. It is only partly true that computers are changing the world. It is more true that man is changing the world by the use of computers. The distinction between the two statements is a crucial one to planners.

The Sisson report includes a prediction that is commonly seen in futurist literature: man's increasing mobility will pose many problems, one of the most invidious being the risk of pandemic disasters. The inevitable response to predictions like this one by anyone taking systems approach to health problems is the reminder that the health care system in any one society is of course not a closed system but rather a part of an open system of international proportions. National planning will have to take into consideration international concerns and issues. In fact, Sisson predicts that a "new round of health treaties among nations will have to be established."

Clearly, the health care system will be put to severe tests in the coming years: its environment will be subjecting each system to severe stress as the demands on it impinging from the outside increase their number, their pressure, and their interlocking complexity.

In the area of politics and government the Center's staff have made some very interesting predictions. The key words are government *planning*, government *control*, *centralization* of administrative services, and the *manipulation* of structure to acquire desired ends, words which today tend to carry more malignant than benign connotations.

Standing in some contrast to these is the prediction that a "general invasion of public policy arenas will accompany the growth of new-corporatism as business firms provide more and more services once reserved to government." It would seem that the health care system might be expected to become nationally centralized and under governmental control or that it might be fragmented into large and complex segments, each of which is administratively complex and highly centralized, segments which are under the control of several different arms of the establishment, business and government being but two examples of possible foci of control.

The important point here is that whichever alternative occurs, the

factors controlling the course of events in this area are probably largely external to the existing health care system. The realities of political power would seem to indicate that the ultimate choice in this very broad area will not be in the exclusive hands of health care leaders. Indeed, the elements that shape this particular aspect of the system's future are so extremely numerous and complex that it will likely seem to most of us that the power for making that choice rested in no one place, that indeed the decision was made by unseen others.

Reference to the very quality of the unmanageableness of large systems leads us to the prediction which states, "because mathematicians believe nothing is in the offing that will enable us to learn how to manage large systems, the problems of these large, unmanageable systems will be solved by creating smaller social units." Obviously, what is suggested is that society, over the next twenty-five to fifty years at least, will be struggling with the tremendous strains and pressures that will result from the opposition of two very strong forces at work: the growth of large systems that will overlap and tend eventually to merge, against a process of fragmentation, segmentalization, specialization, and simplification. The resulting impact on the health care system is an open and very crucial question.

It is obvious even today that health care has emerged as one of the leading issues; its time has come for occupying the spotlight of public attention. The Center's staff projected this trend into the future this way: "we must give political definition to our national 'well-being goals' just as in the past we defined our production and employment goals; we shall have to discover how to guarantee the equal right of all citizens to well being: a new social contract."

The Center's staff saw significant changes in society's values in the coming years. Among the possibilities are: a reversal of values concerning age, a "new kind of puritanism" and corresponding change in how we view and treat sin and guilt," a "large scale religious revival" may occur but the most basic value change of all will be a post-industrial ethic that will be less exploitive than the Protestant ethic, a resacrilization of nature and of life. In short, a more thoroughly ecological approach to living, an organic whole view of the individual and his universe.

Matek on Trends Affecting Health Policy. Matek's (1973) approach to projecting the future of health practice is quite different from Sisson's, although he too is examining the large-scale and long-range trends that will shape the future context of health care.

The seven large-scale trends identified are:

1. A rate of world population growth that surpasses even normal exponential growth rates.
2. Increasing urbanization and residential density.
3. A series of crises resulting from too high a rate of consumption of raw materials (e.g. acute scarcity of food; exhaustion of such nonrenewable resources as petroleum, gold, copper, lead, and natural gas), a trend that is exponentially depletive and pollutive.
4. An increase in production efficiency.
5. Increasing mobility, both in terms of travel patterns and residency patterns.
6. Technological development characterized by synergistic convergence of new techniques.
7. Increase in both the volume and intensity of communications, resulting in overstimulation and overproduction.

Using these trends as a framework for his discussion of health care futures, Matek points out that health issues are "subordinate to larger interacting issues of population, food production, industrialization, pollution and resource consumption" which must be resolved if the health field is not to be "plunged" into "regression." He goes on to assert, "commitment to a health profession must now be regarded . . . as necessarily including active commitment to the resolution of these larger issues."

If it is assumed that just about anything needed technologically is possible, then given the scarcity of basic resources, priorities will have to be set. Ultimately this means coping with problems of "value, policy, and social techniques." Matek predicts that under these conditions, conflicts between groups will be maximized and standards of conduct will be compromised. Because society will be faced with the necessity of reducing waste and the deterioration of relations among groups it will need to become more systematized, standardized, accountable, and equitable.

Matek further predicts that "the most pandemic health problems of the next three decades are very probably going to be physically, mentally, or behaviorally related to stress." An increase in the anxiety level of society generally will cause people to "retreat into superficial or anachronistic patterns of thought. "This defensive reaction that will

only cause the stress level to rise since it will not serve to pragmatically reduce or eliminate the causes of anxiety and alienation—a spiral process that could ultimately cause the degeneration of the political process into some form of "friendly fascism." Clearly, health care providers will be maximally involved with the management of stress, which Matek says is likely to be the leading health issue of the remainder of the century. Specifically this could mean: (1) an increase in escapist behavior, (2) a general decline in the level of mental health, (3) the escalation of psychosomatic involvements. Because stress is in part a social phenomenon, the result of interaction between individuals and their environment, social patterns and institutions will need to become more flexible.

Matek further remarks that current attitudes and roles of health professionals are not consistent with the need to incorporate the treatment of stress into most medical regimens, to wisely allocate existing resources, and thus address issues of intersystem organization, which he declares are the "most important responsibilities of health professionals and institutions." Obviously, efforts at change among health professionals will be "stressful, difficult, and resented." Efforts at collaboration will be assailed by ambiguities and by difficulties attendant upon the need to deal with other systems "at many levels." As Matek asserts, "it will be an enterprise in rapid professional evolution as well as rapid social change."

In summary, it can be said that people working in the health care system must reorient their thinking and become less parochial if they are to succeed in solving the most pressing health problems; that larger issues not usually thought to be health care responsibilities will impinge with great impact upon the system; that the health care system will need to be more systematized, standardized, accountable and equitable; that the system's greatest challenge will be the management of stress, both internal and external. One corollary to these points is that solutions, to be effective, will have to be comprehensive and holistic, and not piecemeal or ad hoc.

Hubbard: The Context as the Source of Health Problems. No look at the health care system in its context would be complete if it were to ignore the extent to which the context itself is the source of health problems. Hubbard (1970) is only one of the many authors to point out that the health problems that are now emerging as the leading ones are socially and culturally caused—a fact that represents a radical change from the conditions prevailing in the non-too-distant past. The problems Hubbard identifies as the most pressing are: poverty, excessive population, obesity, accidents, alcoholism, drug abuse, smoking,

physical indolence, and suicide. He points out that they are "far outside the central intellectual interests of modern biological research" and are often outside the concern of the health establishment as it is presently constituted.

As any health professional who has tried to deal with these problems knows all too well, the impediments to successful treatment are not medical, they are "political, economic, cultural, and sometimes religious." Hubbard summarizes by asserting that "the real dilemma is the contest between the value assigned to health and the value assigned to competing activities that may be antagonistic to health."

Hubbard's conclusion is that health knowledge is, therefore, "not a single coherent field of study. It is, rather the accumulation of information from a broad range of disciplines." No health profession, therefore, can fail to emphasize the interdisciplinary nature of its knowledge base without seriously jeopardizing its effectiveness in the future health care system.

The Health System As a Structure

Relatively few efforts to predict the future of health care direct as much attention to the social context in which it operates as these articles by Sisson, Matek, and Hubbard. Most attend to health care alone, isolated from context, and of course many of these do not attempt to look at the whole system but merely at one part. The quantity of this type of literature is staggering; there is probably not an occupation, specialty area, or profession that has not in recent years asked the future direction of health care. Because of its volume, no attempt is made to review this literature comprehensively.

Instead, a few examples of future-oriented articles and proposals have been selected to provide insight into the numerous approaches to the health care system that emphasize system structure. The first example focuses on administrative structure, and the second proposes a system structure based on health care categories. There are any number of ways one might build system structure, but the ones chosen for review are those which currently enjoy widespread circulation and discussion and contain familiar ideas.

Structuralists tend to place a premium on efficiency, but their restricted focus prevents their developing a full definition of efficiency, which in health delivery can have many and possibly incompatible meanings such as efficient use of money, materials, or health providers. In a word, the structural approach is by definition incomplete, a fact that systems theory allows us to predict because important systems elements such as system process or system goals are omitted.

The Administration of Health Care: Intervening Bureaucracy. Health professionals frequently debate the effects that an intervening bureaucracy would have on effective delivery of health care. As various methods of third-party payment have developed and grown, many health providers have become increasingly sensitive to the issue.

Senator Edward Kennedy's proposed Health Security Act of 1973 (S. 3; H.R. 22-23), which is one of many health insurance proposals under recent Congressional scrutiny, is an example of a structurally oriented system proposal. Unlike the other proposals circulating in Washington,* the Health Security Act actually creates a wholly new administrative structure for the nation's health system, a fact that makes this proposal particularly useful in this analysis of structural health planning.

The bill proposes the establishment of a national program of health insurance whose purpose is two-fold: (1) to provide health insurance for every United States resident, and (2) to expand and improve health services while establishing budgetary mechanisms that keep health costs under control. The second goal is to be achieved by setting standards, enforcing limits, and controlling process within the system. Payment to institutions and health care providers will be tied to compliance.

The structure that is proposed in the act can be summarized briefly. The administration of the program would be divided functionally into three parts: a small board of presidential appointees to administer the overall program, a larger advisory body that would include both health providers and consumers, and a commission whose function would be to control the quality of health care. The division of tasks is roughly analogous to the division of work between the executive, legislative, and judicial branches of the government. Looked at another way, the structure is organized on four levels: the national, regional, state, and local. On each level there would be offices representing each of the three

*Other proposals include a plan for catastrophic health insurance sponsored by Senators Russell Long and Abraham Ribicoff; an AMA-backed plan called Medicredit (S. 444; H.R. 2222) sponsored by Senator Clifford Hansen and Representatives Joel Broyhill and Richard Fulton; a proposal for tax incentives for buyers of private health insurance backed by the Health Insurance Association of America. In addition, the Nixon administration after 1971 developed its own national health insurance poposals, later (see *Washington Report* 1973), it seems, developing two plans, the Standard Employer Plan (SEP) and the Government Assured Plan (GAP). All these proposals are either specialized, limited insurance plans or rely on the structure of the existing health insurance industry. They are mentioned here because the number of proposals being considered supports the assumption that some form of national health insurance is nearly certain in the not-too-distant future. Hodgson (1973) provides detailed descriptions of these proposals. President Ford's intention, stated in his August 1974 address to the Congress, to press for quick action in the formulation of a national health program appears to reflect continuing high interest in the subject on the federal level.

functional branches of the administration. In a country the size of the United States, the number of people involved in such an organization would be very large.

It must be remembered that the structure proposed here, despite its enormous size, would not be the overall structure of the total health care system, but rather the structure for only its administrative portion. Its function is to oversee the provision of care, not to provide care; thus the term *intervening* bureaucracy. By the addition of such a structure to the existing system, the proponents of the bill hope both to improve health services and control health costs. The underlying means to reach these goals are various forms of efficiency.

Obviously, there are both advantages and disadvantages inherent in this approach to systematizing the health care delivery system:

1. The locus of power in health care could shift dramatically. Today power is primarily in the hands of health professionals. The power in the proposed system could shift into the hands of a health managerial or administrative elite, to be shared in part with the consumer. The emergence of such an elite could mean that party politics would enter the health care delivery system for the first time.

2. Under a more systematized form of health care delivery, care would be more standardized, routinized, and, it is hoped, more rationally distributed. However, because centralized quality control would be based on statistical norms, quality would inevitably tend to hover at just above acceptable levels. Peaks of excellence, especially those that are costly, are unlikely to receive much encouragement in a system committed to the widespread equitable distribution of average levels of care.

3. Because significant deviance from prescribed norms of practice, especially those that are costly, are not covered by the proposed insurance program, innovative or experimental forms of treatment—whether ad hoc or part of concerted experimental programs —would have to be financed privately. Practice protocols, which would limit practitioners to the use of drugs specified as approved in the treatment of specific diseases, and the proviso that any procedure that is not available everywhere in the country cannot be covered could together encourage the development of two parallel systems of health care, one financed publicly, the other privately. The latter system would tend to be more progressive and more dramatically effective in tertiary care; the former's

strength would lie in its efficiency and effectiveness in primary care. The political and social consequences of such a split are, to say the least, sobering.

4. Health care delivery under this type of structure would take on all the characteristics that go with a massive, hierarchical, centralized bureaucracy. Along with standardization, equity, and formal accountability would come a slowed rate of change and an inability to react flexibly to exceptional situations.
5. The high costs attendant upon the proliferation of staff and paperwork that are characteristic of bureaucracy could mean that a disproportionate amount of each health dollar would not be spent directly for health care.

Structure Based on Categories of Care. The structure of a social system is often thought to be visible in administrative charts and bureaucratic hierarchies; however, systems theory suggests that systems may be structured in other terms as well. The Kennedy proposal is an example of the more familiar bureaucratic approach to social structure; the approach now to be examined is of another kind: structure that is designed on the basis of functional activities within a system.

White (1973) outlines one means for structuring the nation's health services on the basis of the three categories of health care: primary, secondary, and tertiary. (See pp. 74-76, where the definitions of these terms are described.)

In this scheme, services are coordinated regionally, with primary care units being most widely dispersed, each unit designed to serve a designated small population. Primary care actually occupies two levels: the lowest, the independent practitioner's office, feeds into health centers or clinics and they in turn feed into community hospitals, which carry responsibility for secondary care. This scheme, however, allows no direct feed from a private practitioner's office into the hospital. Moreover, White assumes that the first contact with the health system for all clients will be through a physician. A more realistic scheme would have to allow for a greater variety of first contact arrangements for care at the primary level. Rutstein (1974) has suggested a triage nurse as the first contact between the client and the care system.

Groups of primary care units feed into secondary care units, which serve the larger, aggregated population of the smaller units. These secondary units then feed into tertiary units, which serve the largest population, that of an entire region. The regions operate independently of each other, but all are regulated by centrally administered mandates and statutes.

The system as White describes it is a highly abstract one, with very few details provided. Despite this, however, one can reasonably assume that a network of care delivery units that interrelate will feed into each other, and at the highest level, into tertiary care units that serve a wide geographical area. It is likely that all these units will be governed by a small but highly centralized and powerful administration. Moreover, it is just this sort of system—highly centralized with small delivery units—that Sisson foresees as being made possible by computer technology. The regionalization of health care is a concept that has received much attention in recent years; the eventual organization of the nation's health care system along regional lines is not unlikely.

Indeed, proposals for reorganizing education for the health professions on the basis of such an approach have received increasing attention in recent years. As Pellegrino (1973) says, an interlocking arrangement between a variety of health care institutions is a necessity if health education is to meet the demands placed on it by the social system of which it is a part. As an example "university hospitals simply do not afford opportunities for extensive training in some of the most important and neglected areas of health care . . . they do not—and probably should not—provide settings for teaching secondary care and the much neglected family care, primary and first-contact care, long-term care, and health maintenance . . . such care is delivered now and is certain to be delivered in the future: in community hospitals, ambulatory clinics, group practices, physicians' offices, and emergency rooms." Experience in settings like these and with practitioners in these areas must become "integral and organized segments of the clinical education of many more students." Consortia such as those proposed by Pellegrino might easily be viewed as having the structure described in White's model. Certainly it would solve many of the existing problems in nursing education. Nurses are now educated, depending on the generic program selected, in either secondary or tertiary care and rarely for primary care in any instance.

Two of the five trends that are likely results of the institution of a national health security program like Kennedy's would also be likely if health care were to be regionally structured along the lines of White's model or other quite similar ones. First, power would likely shift away from health professionals, although probably not as decisively as would be the case with the Kennedy proposal or others similar to it; the Kennedy proposal envisions the addition to the existing system of a new subsystem that would be endowed with extensive power, whereas White's model proposes a more rationally ordered set of interrelationships between existing health institutions. Second, care under such a

system as White's might be more standardized and routinized than care today, and it certainly would be more rationally distributed, but whether this would have the effect of putting a lid on quality by keying it to an average level is not known since White's model does not indicate what mechanism, if any, would be employed to control quality.

A third possibility emerges in this scheme for health delivery: an effectively centralized hierarchy like this one could have the unfortunate effect of setting up a system of buck-passing, where responsibility and accountability for the individual client's welfare would slip upward in the system and finally out of the reach of the disgruntled individual. But this is not clear, since this model is incomplete: it does not indicate how responsibility and accountability are to be assigned. Nor is it clear whether or not continuity of care is to be provided for at all; continuity would go a long way in assuring that at least a modest level of accountability could be maintained.

An obvious advantage of the regional approach is the economies it makes possible: regional coordination to this degree would allow for very effective control over expensive duplication of services and facilities. This is why legislators and other health planners have often been so enthusiastic about regionalization proposals. Something like the same concept can be seen as the motivating force behind simpler, small-scale forms of cooperation such as consortia of educational institutions, the activities of community and area planning commissions, and even cooperation in planning complementary rather than competing services among individual hospitals.

Efficiency and Values: Whose Health Matters Most? Some of the problems and issues inherent in the establishment of a health care system that is carefully structured so as to be centralized and efficient on a massive front are described by Dubos in the final chapters of *Man Adapting* (1965). The basic dilemma, as he sees it, is not at all new: which has priority, the welfare of the individual or that of the group? Which is the higher good, the individual or the collective? Which is the health care thrust needed most in the coming years, that which strives for the individual's health or that which puts the collective health first? Dubos describes the second type of health care this way:

> As our societies become technologically more complex and more highly organized, they generate problems that affect the well-being of the social body as a whole, by giving rise to new types of pathological disorders and to new types of collective responsibilities. In this sense, there is rapidly emerging in the modern world a set of problems that could properly be

> called *social* medicine. . . . The health field is no longer the monopoly of the medical profession: it requires the services of all sorts of other skills. This collaboration will become increasingly urgent as the community demands that steps be taken, not only to treat its diseases, but also to protect its health. (pp. 404–405)

But, as the pendulum swings in the direction of a more social medicine there is the danger that adherence to the collective good may extract unexpected costs. Dubos puts it this way:

> The danger in this inescapable trend is that the medical profession may be progressively edged out of many social aspects of medicine. While persons trained in the physical and social sciences, from engineers to general biologists and lawyers, play an essential role in the total medical picture of our society, it is usually difficult for them to comprehend all the complexities and subtleties of health and disease problems. Limited points of view are likely to generate oversimplified formulae of action. . . . (p. 405)

Dubos points out our greatest need when he says, "problems of decision created by the dilemmas of modern medicine demand a new kind of sociomedical statesmanship involving not only physicians and medical scientists but the citizenry at large" (p. 429).

Or, to put it another way, we are now undergoing a transitional period in health care. In responding to the pressures exerted by first one social crisis and then another, we are trying to create a more social medicine in the hope that emphasis on primary care and preventive techniques that are widely and equitably distributed will prevent at least our worst fears from coming true. But just what the costs of such a shift in emphasis will be is hard to discern: some of the costs that seem likely seem also to be high.

For example, if raw materials and basic resources are to be in short supply, are we to assume that at some point we will have to decide that certain rare acute diseases are just too expensive for society to allow them to be studied and treated? We are already faced with such a bitter question in the case of hemodialysis. It seems reasonable to assume that the same kind of decision—whom can we afford to save and whom must we sacrifice—will occur in connection with numerous other health problems as well.

Whatever else the structuralists' proposals do—models like Ken-

nedy's and White's offer approaches that can facilitate the pragmatic solution of some very bothersome health delivery problems—they cannot offer answers to questions like these. The problem lies with the incompleteness of structure-centered modes: the systems theorist knows that only a holistic approach that incorporates both structure and process in the design can provide a model equal to the task.

The Health System As a Process

Garfield's Proposal: The Kaiser-Permanente Model. Garfield (1970) uses the Kaiser-Permanente plan to derive a generalized model for health care delivery. His proposal starts from the same assumptions as Kennedy's program does—that health care is the right of all citizens and that the delivery of care must be reformed so as to make that right a reality. But the approach Garfield adopts is one that focuses on process, with the idea that the right changes in the delivery process will result in the right changes in structure. The Kennedy bill is based on precisely the opposite assumption, that proper changes in structure will bring about the proper changes in the delivery process.

Using a systems analysis approach, Garfield compares the traditional system with the Kaiser-Permanente system and suggests that fee-for-service arrangements in the traditional system have indeed served the purpose of keeping people from seeking help soon enough to make prevention and early treatment possible. The fee thus limited the number of well and early-sick clients seeking entry into the system. In support of this argument, Garfield says that experience with Medicare and Medicaid has been precisely the same as that of the Kaiser-Permanente group: namely, that the removal of the barrier of a fee creates another barrier to good practice and that is an "uncontrolled flood of clients" all seeking entry at one narrow point, the physician. The fact that available physician time then becomes occupied by healthy people interferes with the care of the sick and disabled. The out-patient clinics and emergency rooms of some community hospitals are staggering under this load. What is more, the physician, whether in an office or a hospital clinic, is being asked to apply his training for sick care to the examination of basically well people, a reverse use of his or her education.

Garfield suggests that the solution to the dilemma is to find a "new regulator . . . at the point of entry, one that is more sensitive to . . . need than the ability to pay and that can help to separate the well from the sick and establish entry priorities for the sick." The regulator Garfield chooses is a system of health testing called multiphasic screening that combines a "detailed computerized medical history with a comprehensive panel of physiological tests administered by paramedical per-

sonnel." Garfield lists other advantages this regulator has over the fee-for-service method or the first-come, first-served method of fee-less service: "It detects symptomless and early illness . . ., aids in the diagnostic process, provides a basic health profile for future reference, saves . . . time and (client) visits, saves hospital stays for diagnostic work and makes possible the maximum utilization of paramedical personnel." Finally, "it falls into place as the heart of a new and rational . . . delivery system."

The system Garfield proposes is one based on a process that differentiates the healthy client, the symptomless early-sick client, and the sick client, and assigns them to wholly separate services: a health-care service, a preventive-maintenance service, and a sick-care service. Because the health needs of the typical client of each of these three services would be very different, the services differ greatly in terms of manpower, facilities, and geographic locations.

The health-care service would be a new beginning, a service without historical precedent. By segregating health care from sick care, "true health care" would at last have the chance to develop, Garfield says. Housed in a new type of facility, the service would provide health education, immunization, posture and exercise programs, counseling in psychosocial areas, including drug abuse, and clinics specializing in nutrition, family planning, and prenatal care, well-baby care, and related services.

The preventive-maintenance service would provide health services that are available today but that are often attenuated because they are submerged in sick care. This division would provide care for common chronic illnesses that require "routine treatment, monitoring, and follow-up." Clinics in this service would specialize in such areas as obesity, diabetes, hypertension, arthritis, rehabilitation, mental disability, geriatrics, to name a few.

The sick-care division, unlike the others, is manned primarily by physicians. The support from the other divisions to this one is apparent: diagnosis, follow-up the education of patients and relatives, in particular.

Sick care would be extended in a medical center that could be surrounded by "outreach" neighborhood clinics where services for health-testing, health care, and preventive maintenance would be located. Within the medical center would be facilities and personnel for intensive and acute care, extended care, radiotherapy, and special laboratories.

The system would depend on the computer for coordination. The computer center would "regulate the flow of patients and information among the units, coordinating the entire system." Although most pa-

tients would enter first through the health-testing service, others—emergency cases are the primary example—would enter first elsewhere. Just what path the client follows in passing from one division to another differs with the client, for his needs are what determines the path of movement.

There are drawbacks to Garfield's proposal. Although multiphasic screening has received much attention in recent years, not all health providers are ready to rely on it so completely as this approach would require. Moreover, the question of economic feasibility for the use of the computer to comprehensively coordinate the health care system is one that has not been resolved. And many would react with hesitation to any system as centralized as this, believing that it could pose a serious threat to clients' rights of privacy. The most serious dilemma is who is finally and ultimately responsible for the client's welfare?

Function Follows Funding: The Closed-End System. But Garfield's is not the only process-oriented approach; other writers have focused on some aspect of health care process and have thereby added insight about other facets of the delivery problem. Saward (1973) takes a look at the health care process, but he analyzes what happens to health procedures as a result of funding procedures. He says, "That form follows function is as true for the structure of programs as it is for physical structures. It might be added that function follows funding." He agrees with Garfield that the fee-for-service method has shaped today's system, but he departs from Garfield after this point.

He assumes "some form of entitlement of everyone to a basic set of personal health service benefits" will have arrived in the United States in ten years or so, benefits that might or might not be federally funded. He assumes also that "during the same period the costs of health care will have risen" and that over half of the costs will be tax-funded. This means that "health care must compete with other priorities . . . under public review" and that "at the end of the next decade the percentage of the total gross national product devoted to health will be unable to rise further . . . (in short) there will in effect be total budgets for health . . . and it will be necessary for providers of health services to operate within the annual budgets." In the face of the continuing rise of costs for technical developments, "There will never be enough money to satisfy what seem to be the rational needs of the health care system." The new element, unprecedented in our health care system today, would be a "strong emphasis on cost effectiveness."

For the most part the system is now operated on a fee-for-service basis, an open-ended process of health economics. A change to a specific financial allotment, a closed-end system, carries enormous implications

that are both emotional and practical.

Such a change would very likely move away from a fee-for-service method to a "politically based unit of authority to resolve questions of allocations." Delivery organizations under such authority might resemble the Health Corporations proposed by the American Hospital Association in its Ameriplan; existing prototypes of other possible delivery organizations would include prepaid group practices, foundations for health care, health service corporations, and the like.

This is another system that would be structured regionally. Health delivery organizations would be alloted funds "in relation to the numbers and demographic characteristics of the population they voluntarily and competitively control." Whatever the structure, the basic process of the annual budget, a closed-end system, has at least the following implications:

1. The means of determining the quality of health care provided by any one organization would have to be evaluated in terms of better health for the population served under the evaluated plan as opposed to any competing plan. The means for doing this is elusive at the moment; developing better methods and educating people to do it would mean a new thrust in both health research and education.

2. The problem of priorities would be most troublesome. Even assuming that optimum efficiency of delivery could be achieved, Saward points out that "no system can provide every service that anyone might want." The question of who will decide priorities is a meaningful one.

3. Present concepts of the respective roles of health professionals would be certain to undergo radical change in a closed-end system. Saward puts it very simply: If a "task can be done by a nurse practitioner at a third of the cost . . . there will be interest in the delegation of the task." In fact, it is safe to say that all kinds of tasks and responsibilities will be handed downward, coming to rest with the person whose education prepares him exactly for that level of performance. It is not a new process in health care, by any means, but in a bounded system it will happen more quickly and more often.

4. A closed-end system will provide strong motivation to shift emphasis away from sick care and toward health maintenance and illness prevention. The proponents of prepayment plans, which operate under annual budgets, have long argued that budgeted

health care places an economic premium on keeping clients well. A widespread movement to budgeted health care might very well have the effect of shifting financial support for research to projects that seek to enhance understanding and capabilities in preventive health; it would also increase interest in the improvement of skills in these areas. Research and development would have to come first, as knowledge in this area is inadequate—the attention has up until now been so focused on disease that health care and prevention have been something of a step-child—so that even the universal budgeting, should it come about, would not cause significant changes in health on a broad scale for a number of years.

Cost-Effectiveness and Service Goals: Are They Compatible? Two process-oriented approaches to reorganizing the health care system have been examined, emphasizing the distinctive qualities of each. Now an examination of the common qualities is appropriate.

A close look at Garfield's model, which is based on the Kaiser-Permanente system, and at Saward's model, based on the concept of bounded systems in economics, reveals that both are fundamentally analogous to the industrial model, that is, cost-effectiveness is the primary goal of both systems. Making such a criterion one of the primary goals would be revolutionary, in the sense of changes it would stimulate in the system.

Proponents of cost-effective health delivery argue quite sensibly that their approach would inevitably cause an improvement in health maintenance and disease prevention, since obviously a well population is much less expensive to care for than is an unhealthy population suffering a high incidence of disease. The cost-effective system motivates care providers to keep people well or to detect and treat disease and disorder at the earliest possible stage.

However, it is necessary to examine a possible alternative outcome to such an approach: Would health providers' drive to achieve greater cost-effectiveness prompt them, consciously or not, to diagnose health problems poorly or to avoid initiating treatment for borderline cases? If it can be argued that today's fee-for-service system is the cause of too great a readiness on the part of physicians to prescribe medicine or perform surgery, it can equally logically be argued that a reversal of the economic motives would create exactly the opposite problem, fostering an unacceptable degree of conservatism in the treatment of disease and disorder.

Another objection to the cost-effective approach to the design of health care systems is stated by Somers (1973), who observes:

> Among the many paradoxes associated with the triumphs of modern medical technology none is more striking than this: The more advanced and the more effective the technology, the greater the overall costs of health care. . . . In many industries the more effective the technology, the lower the unit cost of production. . . . Diagnostic screening could be handled on a mass basis from the production point of view.
>
> But health care, by and large, does not lend itself to the mass production approach. There seems little hope that the rising costs of medical care can ever be balanced by the same sort of productivity increases that we have witnessed in industry in general. (p. 39)

Because both Garfield's and Saward's approaches focus so exclusively on process and so little on structure, especially on administrative structure, one has no way of knowing what mechanism might be devised—if indeed one is possible—for monitoring and reviewing decisions and thus maintaining quality of care at an optimum level. How is the client to be protected from the possible flaws—from his point of view—of a system that has simultaneously two goals, his welfare and its own? In short, a health care model that is strongly keyed to cost effectiveness is perhaps not appropriate for application in the non-industrial area of health care service in which the interpersonal factor assumes so much importance in terms of eventual results and outcomes. A service that does not serve is, however cost-effective, an expense that is not affordable.

The Health System and Systems Theory

It would seem appropriate at this juncture, having examined examples of structure-oriented and process-oriented approaches to health care, to review the reasons why systems theory provides a more satisfactory basis for health care planning by permitting development of models that balance process and structure.

The theoretical viewpoint of systems theory provides a way of considering many variables simultaneously. Clearly, our very complex society makes such a tool necessary. Second, systems theory describes a method of considering process as it takes place in an overall structure, a method most appropriate to a situation characterized by the constant

and rapid change that defines the tenor of modern times. Finally, systems theory allows consideration in perspective of the role of values within the ambience of contemporary thought. This means that health care delivery can be examined in terms of the societal ethos that surrounds it.

Three types of approaches to the future of health care delivery in the United States have been examined and it can be deduced that:

1. Those that concentrate on the forces outside the health system show that health planners will confront increasingly complex and difficult problems, most of which will be shared with other social systems. The health care system cannot tackle alone those issues that concern poverty, equity, crises, limited resources, and the like. Shane (1972) reports that futurists have been "highlighting major crises that will challenge planners during coming years, and many of these are problems that the health system cannot ignore but that it cannot solve alone." Among these problems are the "crisis of crises," the sheer accumulation of extremely serious problems, the loss of credibility of people or groups of people in authority, "institutional overload," disagreement over the definition of the good life, the loss of widespread agreement over what constitutes right and wrong, the problem of equity versus egalitarianism, and others (pp. 4-6). It is clear that health professionals will need to become more knowledgeable about many areas heretofore considered quite unrelated to health science, areas such as urban planning, impact upon the individual of increasing alienation, poverty, leisure, and legal rights.

2. Those that concentrate on the structure of the system, either by predicting what it will be or by proposing what it should be, sacrifice some attention to process, thereby risking a simplistic approach to planning resulting in what many health professionals have called protocol or "cookbook" care. No overall structure can adequately provide for the process on the interpersonal, dynamic, complex and delicate level that the events and situations encountered in the health care system demand, events that allow for the expression of society's most profound values.

3. Those that concentrate on the process of health care attempt to base their planning on a sensitivity to the fact that health care as it is delivered to the specific client is idiosyncratic, characterized by many variables, and that both the long-range and short-range health needs of both society and the individual need to be recog-

nized and met. However, they tend to sacrifice careful attention to the pragmatic necessity of providing a system with enough structure to keep it running. A system, if it is to be successful, must survive over the long term. Systems whose economic feasibility are largely unknown or whose economic goals might be inimical to its health service goals cannot be deemed viable.

What one needs, obviously, is the holism of a systems approach, which promises to provide ways to avoid the skewed effects of models that give too much emphasis to structure or to process.

It might be well to note the work of Miller (1972) and Field (1973) describing a fully systematic approach to the health care system—work that attempts to keep structure and process in balance, that views the health system as a subsystem, a part of a larger society and in interaction with other societal subsystems in the larger system. Work in applying systems theory to forms of health care delivery is relatively new and as yet quite abstract in nature. Miller, Field, and other authors writing from this viewpoint are offering a thinking tool, a method that may give planners and providers the answers needed, producing in them the realization that the forest is visible, despite all the trees.

Finally, a brief word needs to be said about all planning for health care, whatever its philosophical base. Because the nation is in the throes of coping with change from rural society that was relatively widely dispersed to an urban, massive society characterized by density and an accompanying sense of anonymity and alienation, health planners will be forced to cope with strong resistance to a high degree of planning for any activity which, like health care, is fundamentally an interpersonal undertaking. Resistance that planners will have to cope with will come from within themselves as well as from others. One difficulty will be to overcome the apparent contradiction between society's overall health needs and the client's right to choose the people who provide his health care and to choose his own level of wellness.

Underplanning could spell disaster for society if it causes us to fail to solve health crises capable of destroying society. Overplanning could subvert the individual, who might define himself healthy enough but unhappy in "a brave new world." By the same token, underplanning could spell disaster for many individuals whose health needs might go undiscovered, ignored, unmet. Overplanning could be catastrophic for a society dedicated to a concept of democracy and committed to ideas about freedom that seem to be incompatible with the dictates of an efficient system whose costs can be met.

THE FUTURE OF HEALTH CARE: THE UNCERTAINTIES

The whole literature on the future of health care includes quite a wide range of opinion: from those who declare that we are in the throes of a great health crisis to those who deny that our problems are very bad at all; from those who propose a total, radical change in the whole system to those who fight vociferously in behalf of the status quo. The majority fall somewhere in the middle, foreseeing and proposing piecemeal change and the gradual evolution of the system. There are three areas, however, in which a surprising amount of agreement occurs; although writers disagree or are uncertain about eventual outcomes, most agree that these very important trends are already underway: One is the changing roles of health professionals, one is the changing function of the hospital, and the third is the change away from an exclusively fee-for-service economy in health care.

Changing Roles of Health Professionals

A nearly universal agreement was found that roles of health professionals will be changing in the future, that roles will overlap and blur and that it will be increasingly difficult to define health jobs in terms of exclusive or unique tasks and responsibilities. In fact, the term *health professional* is becoming increasingly difficult to define. Actually the whole process of blurring and overlapping presents many curricular challenges for nurses, physicians, social workers, and other allied health personnel. Already we are beginning to see an outcropping of many programs in distinct and different professional schools purporting to accomplish similar purposes. Practitioner programs in nursing, physician's assistant programs in medicine, and community health practitioner programs in the junior colleges, to name a few, are exemplary of a change in the whole dimension of the blurring and overlapping of roles and knowledge bases.

In medicine the question appears very much at issue. Will physician education continue to produce graduates who specialize and even subspecialize in their own practice, or will there be a rather massive return to general practice? Primary and preventive care is, of course, the area that today receives the most attention, and it is the area where most critics agree improvement is needed. It is in primary care that continuity of care is expected, that more personalization and humanization is effected, that a holistic approach to a patient rather than a disease can be most fully realized, that preventive and maintenance care are provided. The crucial question concerns the response of physicians to pressures within the health care system. Will physicians continue to

be treaters and curers of disease, leaving an increasing portion of primary care to be provided by others, and claiming secondary and tertiary care areas as their special domain, or will physicians move back to general practice in massive numbers?

In nursing the issue appears to be one of role. Will nurse education continue to produce graduates who specialize and even subspecialize in acute care, or will there be a massive reorientation to primary care? The crucial question is again the response of nurses to pressures within the health care system. Will nurses continue to provide acute care services, leaving an increasing portion of primary care to physician's assistants and others, or will they create new roles and collaborative relationships for chronic care management, geriatrics, the management of stress, and group and independent practice?

It is predicted that the trend among physicians toward increasing specialization will continue and that those younger medical professionals who choose family practice as a specialty will continue to represent quite a small fraction of the total number of physicians. Moreover, these doctors will practice less as generalists than as a new kind of specialist who will be functioning more and more frequently as managers or supervisors of primary care units. They will be too few in number to be able to carry the full burden for the actual provision of primary care. The provision of primary care directly to clients will be an area increasingly open to, and indeed in need of, other health care providers, especially nurses.

A significant movement in this direction, however, will be slowed by several factors—the opposition of some physicians and some nurses to this sort of change can be expected, and the need to change the education of other members of the health team so as to fully prepare them for the added responsibilities.

Other and more powerful factors are propelling change as well. Primary among these is the economic factor; if the demand for more and more effective primary care is to be met, the sheer cost limitations will force us to find cheaper ways of doing it. The physician is now the most expensive worker we have in the system because of the cost and length of his or her education. In addition, other health professionals are also emerging prepared at the highest levels and demanding higher salaries. Some decision will have to be effected as to how to use the talent of these people in an economically feasible manner that precludes their use as the most frequent or sole providers of primary care.

Though the ultimate role of the physician will strongly influence other health care roles, it is not the only influence at work. Indeed, nursing should have become accustomed to role changes by now, since

many such changes have affected it over the past thirty years and continue to do so. As Mase (1973) points out, "A great proliferation of technicians, assistants and aides, as well as more highly specialized health professionals, now perform duties and assume responsibilities previously relegated to those in the general category." It is certainly true that, with the growth of allied health occupations, many of them in response to the development of new technology, registered nurses have yielded certain tasks to others—physical therapy, respiratory therapy, and many operating room chores being examples—and have replaced them with more managerial and generalized functions in coordinating these highly specific activities in the care of a given patient.

With its growing orientation toward the planning and management of care, nursing seems the logical profession, and certainly the one best prepared, to create roles that will fill gaps in our future system of care—for example, in insuring care for the aged that is more than custodial, or in providing quality care for the chronically ill. The management of stress and anxiety is another such gap, one that will assume increasing importance if Matek (1973) is correct in predicting it as the leading health problem in the coming decades.

The growth of new health roles and occupations constitutes a major factor in the blurring of roles alluded to earlier. Hamburg (1973) calls attention to the fallacy of conceiving of "the more than 125 separate health specialties as though they were independent variables totally unrelated to and unaffected by the numbers and duties of each." Paradoxical as it may seem on the surface, expansion and fragmentation as concurrent forces have acted to bring health roles closer together, as no single role can be seen as sufficient for most client needs. As Mase (1973) puts it, "No health profession can go it alone any more." From this he argues a growing necessity for interprofessional working relationships, a team approach to health care, and a strong interdisciplinary component in education for the health professions.

It is highly unlikely that we have yet seen an end of new health occupations and professions. No doubt we can expect more as new settings and agencies spring up to meet new needs and perform new functions.

The Changing Function of the Hospital

Another area of much debate concerns the future of the hospital and its possible relationship to new agencies. The hospital is now the institutional center, home base as it were, of the health care delivery system. The most urgent health care problem relating to the future of the hospital is that it is increasingly used for services it was not designed

to deliver. Its central responsibility originally was to provide care, usually of an intensive nature, for the acutely ill. Over the years other tasks have been added: some hospitals now have as much responsibility as teaching institutions as they do as caring institutions; most hospitals are being used for diagnostic purposes that might be performed elsewhere; other acute care hospitals are providing long-term care of chronic illnesses; still others provide rehabilitative centers and out-patient clinics which include some responsibility for family planning, for drug and alcohol abuse control, and so on and on. The question is whether these functions could be carried out more inexpensively and more effectively in other settings designed specifically for them.

It seems reasonable to assume that pressure will increase to move non-hospital services away and into their own, more appropriate settings and that such agencies as out-patient clinics and specialized nursing homes will proliferate. It would seem that a fragmentation process might be expected, a decentralization of service settings, that would tend to reduce the overwhelming dominance of the hospital over today's health care system. In the belief that varied settings would allow for better practice, many a health professional would welcome such a trend, as would many clients who find vast hospitals difficult to navigate and forbidding places to go for help.

On the other hand, if the Sisson report (1973) is to be believed, it is also possible that the hospital will remain the core of the delivery system, becoming a more massively centralized center for the delivery of care. Therefore the assumptions about what is coming and what will happen represent two opposing thrusts in the delivery system. The picture is an enormously complex one.

As is well known, the concept of *hospital* differs with the setting; there are teaching and research hospitals, there are proprietary hospitals, there are small community hospitals tending to give only secondary acute care, there are huge urban hospitals extending themselves over the whole range of primary to tertiary care—all of them essentially acute care settings. All are caught in the cost squeeze, meeting rising payroll demands, facing up to the possibility of unionization of workers, coping with a client load that is exploding under the stimulus of third-party payment systems, and fighting the exponential rise in the use of extremely expensive health technologies.

Knowles (1973) lists three trends from the 1961–1971 decade indicating that the future development of the hospital may not be linear from present and past operational practices. For example, if the centralized center concept materializes, specialized units or entirely separate satellite care facilities may need to be developed. Ginzberg (1969) has

indicated the impact of federal third-party payment systems in stimulating commercial interests in nursing and convalescent homes, suggesting that satellite facilities may indeed be an imminent possibility. On the other hand, convalescent and nursing home facilities may be developed in geographic isolation from the hospital but with newer and more cohesive ties to a centralized service emanating from the hospital hub. That is to say, centralized services in such areas as primary care, including public health nursing, may originate in and be coordinated with a chronic disease and geriatric service, all issuing forth from the hospital center. Knowles (1973) also observes that smaller hospitals have declined in number, indicating, perhaps, the elimination of an expensive duplication of services and better coordination of care resources. A note of caution might be sounded, however, in regard to moving services away from dispersed points in the community and into more massive centers that stand in isolation from the community they serve.

One other point by Knowles is that psychiatric inpatient services in the acute-care settings have rapidly proliferated. He interprets this as being a sign that the care of patients with psychiatric disorders is being integrated with the rest of the care system instead of being isolated in geographically distant areas. However, not all professionals would be so sanguine about the desirability of treating long-term psychiatric patients in acute-care settings. What the practice does reflect is a growing commitment to returning clients with emotional disorders to an adequately functioning life as rapidly as possible.

For every prediction about the hospital's future an exactly opposing prediction can be found. Some say the hospital will remain at the center of the system; some say that only the university training hospital will occupy that position; others say that the hospital will undergo such extensive change that its place tomorrow will be very different from today's. Further confusing the issue is government funding for primary care centers. Government funding has been withdrawn from OEO and similar projects sponsoring the development of comprehensive health care clinics, and the regional medical programs appear to be faltering now.

The forces that influence the cause of the hospital in the future are so numerous and complex, and there are so many political imponderables, that there is only one certainty and that is ambiguity. It is expected that primary care settings could become decentralized, widely dispersed, and easily available throughout local communities. Secondary care, thus freed of encumbrances that only add to the already strained facilities and personnel, could operate more efficiently, humanely, and

effectively. Tertiary care could then be located with a most miserly hand so that this most costly form of service would be provided as economically as possible and with as wise a use of highly trained manpower as possible.

Whether a rational disbursement of health settings is feasible, or desirable, only the future will tell. Just what the health care settings of twenty-five years hence will be is impossible to say, but it is safe to conclude that kinds of settings are increasing and that employment alternatives for health professionals are expanding.

Fee-for-Service Economy

Another area receiving a great deal of attention is the question of whether or not the traditional fee-for-service economy will continue to be replaced by prepayment schemes. Of course, many prepayment plans exist now, but it is the fee-for-service concept that has shaped the delivery system, and the crucial question is actually whether or not the delivery system will change its form as a result of a significant trend away from the traditional economic base.

Political and economic imponderables play a large part in the course of events here, just as they do with the future development of hospitals, but in addition to these there is one other element that clouds the future. This factor is the one-to-one relationship existing between the client and the health care practitioner who works on a fee-for-service basis.

The third-party payment schemes illustrate how a diadic relationship, in becoming triadic, can also be attenuated. Responsibilities are split; decisions are made by others besides the professional person and client, and are most often made a priori, for a group. The professional becomes embedded in bureaucracy, a situation already quite familiar to many nurses. The physician hospitalizes a client unnecessarily for diagnostic tests because the insurance policy the client holds will pay for those tests only if the client is hospitalized. The nurse is unable to move a patient for valid clinical reasons from room to room in the hospital out of deference to the accounting department who is in turn responsible to the third-party payer.

In fact, third-party payments are changing the meaning of professionalism. The central question is: to whom is the professional responsible? Is it the client alone, the client and the organization simultaneously, or the organization alone? Confusion reigns and will increase until the meaning of professionalism can be resolved theoretically and experientially, and can be individually internalized by practitioners. The problem is not restricted to nursing and medicine, but shared by other professional groups such as architecture and law. Many nurses

have for years sought a solution to this dilemma and have been unsuccessful in their effort to do so, resulting in frustration and hostility toward the bureaucratic structuring of client care. The bureaucratic pull in smaller organizations is usually not as strong, and this fact then presents a strong argument for decentralization of administration and services.

Clearly the fee-for-service economy will not survive unchanged, and a transitional period when both prepayment and fee-for-service plans exist side-by-side can be expected. The meaning of third-party payments for the survival of current professional values is as yet unclear, but an adaptation will need to be made.

The fact of the matter is that pressures exerted from outside the health field will be one of the vital determinants of the financial basis, as well as other elements of the future delivery system. A social sensitivity to the fact that man's resources are not infinite but instead quite finite and sometimes frighteningly scarce is likely to propel an irresistible trend toward more accountability, making health care operate on the basis of an exacting cost-effectiveness. Moreover, in an exacting cost-effective health system priorities will have to be assigned in such a way as to force decisions on the relative values of: (1) primary, secondary, and tertiary care; (2) basic research in biomedical sciences as opposed to more immediate clinical application of knowledge and techniques, and (3) health care that serves individual clients as opposed to care that serves groups instead.

What makes matters worse is that these priorities will need to be evaluated and changed repeatedly as circumstances change. The demands are unrelenting. Moreover, the decision as to who would have the responsibility for setting priorities is itself a value-ridden one, perhaps more difficult than the decisions about the priorities themselves.

Budgeted health care could cause fantastic breakthroughs in the delivery of radically improved health care, or it could cause the destruction of whatever capacity that is now possessed in the delivery mechanisms.

Emerging Themes

The reader will remember that our examinations of feminism, higher education, and the health care system were all based on the same assumptions:

1. *Nursing can be fully understood only to the extent that its context is studied too; a look at nursing which focuses narrowly on nursing alone will not yield all that we need to know in planning for the future of nursing education.*
2. *The environments that influence nursing most deeply and permanently are the contexts that should be examined with the greatest care. Thus, feminism, higher education, and the health system were chosen as the three most important influences on nursing.*
3. *It was assumed that each of these environments could exert any one, two, or three of the following kinds of influence on nursing: creative or productive effects, altering or transforming effects, and negative effects. Indeed, our examinations have shown that each of its environments does sometimes exert conflicting forces on nursing, creating some of its most difficult problems: how does one cope with a force that both benefits and harms one?*
4. *And finally, the assumption was that nursing is itself an influence, a force, an environment of its surroundings. As nursing—or anything else, for that matter—reacts to its context it acts upon that context.*

As unalike as feminism, higher education, and the health care system are, our seeing them as environments of nursing meant that common themes emerged; in fact, they precipitated so readily that it was startling. In this concluding chapter we will delineate some of these common themes.

THE CHANGES IN TRADITIONAL FORMS

Each of the three papers pointed out numerous changes, so many, in fact, that we have at one point characterized the current scene as "kinetic." It is easy to find many examples from these chapters, but one from each will suffice, one from each that demonstrates that traditional forms are undergoing sometimes surprisingly complete and rapid transformation.

In our consideration of feminism and nursing, for example, one underlying theme is the change in the traditional form of the family. We have long since abandoned the tightly knit extended family complex as the standard family unit in society. More recently, even the isolated nuclear family has begun to change too. No longer do we see the man-woman-child combination

as the universal model; other combinations (e.g., man and woman with no children; man or woman alone with children; the many combinations shaped in communitarian experiments) are receiving more attention and are increasing in frequency. We are no longer as certain as we were a decade ago that we can predict what the future family will look like.

The paper on trends in higher education also testifies to changes in traditional forms. One of the most general and widespread will serve to make our point here: up until World War II "higher education" meant to most people the private liberal arts college that served, with rare exceptions, the older adolescents from upper-middle class homes. A college education, in other words, served the purposes of and indeed identified the members of a specific class in society. Today, "higher education" has diversified so much that such simplistic associations no longer apply. If sheer numbers are what count, then we must see the greatest shift in higher education as that move toward community colleges that serve students of both a wider age range and a greater variety of social background and goals. Needless to say, the educational content has changed as the predominant form has changed.

Forms in health care—probably all the traditional forms—are changing. Again, just one of many possible examples will do. Hospitals were once thoroughly oriented to the care of the acutely ill, but with the passage of time many larger urban hospitals assumed responsibility for providing many kinds of care and offered extensive out-patient services to the surrounding community. As a consequence, the hospital appeared to be the focal point, the visible center of the health care system, the one location that people thought of in connection with the provision of health care. But now even this can be seen to be changing again. Neighborhood clinics that provide comprehensive health services, spin-offs from the massive urban hospital, are developing, often in response to broad-based pressure from the community to decentralize, relocate, and humanize the places where health care is provided. As with the family, it is hard to be sure of the future shape of the hospital, but like the family, the hospital of the future is certain to look rather different from that institution today.

CHANGES THAT BLUR DISTINCTIONS

But it is not just that a lot of changes are occurring, and quickly; it is becoming increasingly clear that change more often than not is the kind that blurs distinctions once clear to everyone. Territories that were once marked off by definite boundaries are now overlapping, and the boundaries, if they have not disappeared altogether, are hard to locate.

For example, as we have discussed in our paper on women, male and female roles are today less distinct than at any time in recent memory. Many

functions and perquisites once reserved for one sex or the other are now shared, and the trend is clearly toward increased blurring of masculine and feminine roles. The extent of the change is so great that everything from the superficial, e.g., clothing, to the essential, e.g., parental roles, is affected, and attention is being paid to these changes at every level, from the popular literature to the scholarly.

A similar sort of blurring process can be seen in higher education, where, for example, one important trend receiving attention is the increasing homogeneity of schools. The categories of institutions—liberal arts schools, women's and men's colleges, technological institutions, state universities—once called to mind institutions having a much more distinct individuality than they do today. The trend everywhere seems to be toward a larger and more heterogeneous student body, more inclusive curricula, and more numerous and varied educational goals.

Likewise, as we pointed out in the paper on the health care system, occupational roles in the field of health care are overlapping and blurring. Just what one actually does do in any given health job seems to be determined more by setting and individual circumstances than by job title. Such blurring of function can simultaneously provide opportunity and cause confusion. In fact, it could be said that of all the examples of change we have studied the move toward less clear-cut definitions, whether it is less precise definitions of sex roles, of a school's function, of an occupational role, are increases of flexibility accompanied by increases in uncertainty. Or, put more simply, greater freedom is not ever easier, because it inevitably brings greater responsibility.

THE CHANGING SENSE OF PLACE

"Open" is so very popular a word today—open schools, open marriages, and even open divorce!—as to have become a cliche. The currency of the word implies a change in our sense of place, and in fact we can find many examples of the ways in which outsideness and insideness have become less distinct.

Perhaps the most obvious group of examples comes from the chapter on higher education: universities without walls are but one example of a conscious effort by educators to break down the old attitudes about the kind of place a school is. A university without walls would have no inside that is distinct from the outside, "real" world. Many related reforms make a much less direct appeal to this concept but are nonetheless part of the same impulse—to bring the educational world closer to the rest of the world; such forms include student internships of many sorts, the awarding of academic credit for work experience, the use of others besides professional educators as teachers, and the like. Government agencies, businesses, and other social

institutions not usually devoted to education are joining with educational institutions in formal ways to provide students with one coherent living/learning experience. In the process, the sense of the school as a distinct and separate place is breaking down.

Some of the same process is taking place in health institutions. Here the efforts still seem to be devoted more to pointing to the need for change than to actually bringing changes about. The hospital is the focal point for special attention largely because it is, as we have pointed out, the one place almost everyone thinks of in connection with health care provision. Special problems arise in the case of urban hospitals that are attempting to address their communities' needs in the sociocultural area. Many health professionals are coming to agree that the extent to which such hospitals are sharply separated from their surroundings marks the extent to which many of their new programs will fail. Outpatient services that focus attention on health problems with a heavy social and preventive emphasis such as alcoholism and drug addiction, family planning, genetic counseling, mental illness or the effects of stress, rape counseling, obesity control, and the like, are more often being organized either away from the central hospital or in such a way as to minimize the separation of the hospital from the community. It is widely agreed that such health services succeed better when they are located "out in the community." The purpose is, again, to break down the sharp sense of "inside" the hospital as opposed to "outside" the hospital.

The same process is taking place with the family; it is a subtle process, perhaps, but much of the evidence mustered in our paper on feminism supports our suspicion that the "insideness" of the family is changing. More than ever before, people are seeking satisfaction for basic physical and emotional needs outside their families. With the growth of child care facilities we see an obvious move outward, as increasing numbers of children are being reared outside the family circle during significant portions of their lives. Many adults seek emotional support—support even of a fairly intimate nature—outside the family limits; the proliferation of encounter groups and their many offshoots is but one aspect of this phenomenon. Another is the growth in the demand for clinicians and case workers in nursing, social work, psychology, psychiatry, and counseling, not to mention the increased counseling demands being placed upon the clergy. The debate over whether these changes are good or not will rage for many years; some argue that such "open" family life takes intense and unhealthy pressure off the members of the nuclear family and makes it possible for more people to find more effective ways to meet their needs. It is a matter of increasing the individual's resources and options, it is said. Others argue that the process weakens family bonds by reducing the sense of personal commitment between family members; the demise of the family itself and

the consequent collapse of society is sometimes predicted. But both sides are agreed: the family is no longer so tightly knit and so private a place as it once was.

THE CHANGING SENSE OF TIME

There is a time and a place for everything—or so we once thought. It seems that along with our changing sense of place, that is, our assumptions about the functions that are appropriate to certain places, we have also been changing our beliefs about what is appropriate at certain times.

In each of these three environments of nursing we have seen that our perception of the uses of time is undergoing basic change. Generally, we are less inclined to mark off large blocks of time and assign them single purposes. For example, our conception of the average woman's lifespan is changing in just this way. Once it was assumed that each stage in her life was programmed for a single purpose—late adolescence and the early twenties for courtship (and education, but only as an embellishment), the twenties and early thirties for child-bearing and rearing, the forties and fifties for gradual conversion to the multifarious social and civic pursuits of the matron, and thereafter for the emptiness, the limbo, of the "golden years." However, now we are seeing the stages dissolving at the edges or being assigned many purposes rather than just one. Reality is forcing whatever change is taking place in our perceptions (and, as we pointed out in the paper on women, the perception lags behind the reality) as larger numbers of women are functioning as heads of household, as larger numbers of women combine civic or occupational pursuits with traditional family responsibilities, as larger numbers of women refuse to restrict primary emphasis on courtship to one period in their lives, as larger numbers of women perceive that education need not be relegated to just the first two decades of life, and as larger numbers of women refuse to accept the final decades as years without purpose. In short, the life histories of females are becoming less typical and predictable with every passing year.

In education too we are seeing a re-allotment of time. Where once we assumed that the first two and a half decades in everyone's life was the time set aside for learning, we now talk of "continuing"—read "never-ending"—education. We once paid only lip service to the idea; now we are formalizing the concept. The student body is less and less adolescent each year; increasing numbers of middle-aged and elderly people are entering institutions of higher education, sometimes to update career skills, sometimes to develop new careers, sometimes to enhance private life.

In health care, similar shifts in the perception of time are taking place. The time to provide health care has traditionally been considered to be after the fact of a disease or dysfunction; once sick or in trouble, the client seeks

the services of health care providers. But no longer are we approaching health service so simplistically; as we change our perception of disease processes, as we conceive of health problems more as part of a continuum, as we place greater emphasis on the maintenance of health and the prevention of disease, we see health care as a service that is provided continuously and before the fact, not just after the fact and episodically. Agreement is widespread that such a new orientation is one way to make health care more effective.

Perceptions of time such as these we have cited are like ground swells; they are so basic and so gradual that we often fail to see how great the change is until it is an accomplished fact. And once the change has occurred, it all seems so obvious that we tend to overlook the fact that the changes have been truly revolutionary.

WHERE HAVE ALL THE CATEGORIES GONE?

Clearly, the trends we have reviewed that are common to feminism, higher education, and health care can be subsumed under one overall trend; we live in a world in which clearly bounded categories useful for organizing and perceiving reality are losing viability. It is not that we are having trouble fitting square pegs into round holes; we are rejecting the pegboard itself.

Some people think comfortably of banks of pigeonholes, as in desks, or of filing systems, or of series of boxes or baskets, each container labeled with a subject name; as we go through life collecting information we put each piece of information into its proper category. It is the way we keep what we learn organized, coherently stored away for easy reference later.

The trouble with this system is that it is breaking down under the sheer weight of the amount of information we keep finding that will not fit into one box or pigeonhole. For example, we discover living forms that do not conform to our conception of either "plant" or "animal", we discover objects that do not fit readily into either the category of "life" or "nonlife." We try to understand and to cope with behavior that will not fit our preconceived notions of either "crime" or "disease." We develop courses of study that do not clearly belong either with the English or the history department. We discover that "femininity" and "masculinity" are not the opposites we have often assumed and that they share many traits. The list of such uncomfortable facts could go on and on.

Today we find ourselves facing so much information that forces change that change itself has taken on crisis proportions. We are confronted with the necessity of redefining so much that is basic, even to the point of redefining ourselves, that we suffer often from the effects of great stress. Individual persons, institutions, occupational groups, families, and even

whole social systems are reassessing themselves, redefining themselves. It could be called a society-wide identity crisis.

The one factor that seems to be causing the uproar is the realization that is beginning to dawn on everyone: we live in a small and finite place. Our resources are smaller and fewer and more exhaustible than we had previously imagined. Moreover, the interconnections among them all are much more numerous and complex than we had realized. We live in a seamless web; no system is closed off from the other systems; we live in a system of systems so overwhelmingly complicated and intricate that balance—delicate balance—is supremely important but supremely difficult to imagine, much less achieve.

Such a task requires intellectual equipment, a philosophy, an image of reality that is new. The pigeonholes, the boxes, the rows of labeled file categories just will not serve. To take their place we are developing new perceptions of reality that allow categories to share labels or to change them the way chameleons change colors in response to specific surroundings, that allow boundaries between categories to shimmer and shift and move with change, that allow us to conceive of reality as not just a structure having static shape but as happenings that move and change in time, that allow us to perceive the interlocking processes of change, reaction, and consequent new change in a reverberating chain of events that moves far, far out from its point of origin.

The new perceptions that are being developed are all part of what is called "systems theory." It is a kind of thinking that is closely tied to the development of the computer and that in its practical applications often relies heavily on the use of the computer. Systems theory is a fascinating subject in its own right; its literature is often difficult and very abstract in the hands of pioneer thinkers at its forefront. But the basic concepts of systems theory are very simple; one is the concept we have discussed repeatedly in this workbook: nothing stands alone or lives in isolation. Or, to come back to the idea we focused on in the opening chapter: thinking in systems is nothing more than thinking environmentally, in terms of influences. Start anywhere in reality—be it just one loblolly pine tree—and trace the influences working on it and the influences it wields, examining the interconnections exhaustively, one is bound to return eventually to the loblolly pine but to have traversed the whole of reality in the meantime.

But of course such exhaustiveness is both impossible and impractical, even a little silly. However, the intention *of examining processes of influence exhaustively becomes a viable method for working effectively in a terribly complicated world.*

Which brings us back to the Nursing Curriculum Project and this theoretical framework for a nursing curriculum. Our task is twofold:

1. *To design a model for curricula that will enable nurses to meet society's needs over the next few decades. To serve society well one must first ascertain what society needs and then arrange those needs according to some sort of priority. One must also assess what one's capacities are in order to distinguish what one can do from what one cannot do, either because it seems at the time impossible to achieve or because it would be more effectively done by others.*

2. *To contribute productively to the redefinition of itself that nursing is going through. In other words, to realize and accept the fact that nothing is standing still, much as we might wish that it would. A static world is one that would make final solutions possible; ours is a dynamic world in which no solutions can be assumed to be permanent.*

One, then, plans for the future not only with caution but with flexibility. A nursing curriculum that will serve well over the next few decades will have to be one that allows individual faculties to move quite literally with the times, to assess the surrounding situation and then to act in accordance with the constant need to achieve and then maintain the delicate balance, a state of equilibrium, between the many forces that act upon nursing and that nursing acts upon.

The undertaking is clearly a difficult and challenging one. We do live in "open" times and the problems we face are crucial. The costs of failure would be very high, but the freedoms and the opportunities available to nursing along with these responsibilities are, we think, unprecedented in the history of nursing.

SELECTED REFERENCES

A. Feminism and Nursing

Bardwick, Judith M. *The psychology of women: A study of bio-cultural conflicts.* New York: Harper & Row, 1971.

Carnegie Commission on Higher Education. *Opportunities for women in higher education.* New York: McGraw-Hill, 1973.

Christman, Luther. Maleness—one means to efficiency in patient care. Paper presented at the First Biennial Kenneth T. Crummer Lecture, Alumni Association, Pennsylvania Hospital School of Nursing for Men, Philadelphia, March 18, 1970.

Cleland, Virginia, and Sulkowski, Mary Lee. Social-psychological factors relating to the employment of nurses. In *Research of nurse staffing in hospitals,* Report of a conference, May 1972. DHEW Publication No. (NIH) 73-434. Washington, D. C.: Government Printing Office, 1973.

Degler, Carl N. Revolution without ideology: The changing place of women in America. In Robert J. Lifton (Ed.), *The woman in America.* Boston: Beacon, 1965.

Eisner, Elliot W. *Confronting curricular reform.* Boston: Little, Brown, 1971.

Flemming, Edward. Working for death. In *Dialogue on women.* Indianapolis: Bobbs-Merrill, 1967.

Furniss, W. Todd and Graham, Patricia (Eds.). *Women in higher education.* Washington, D. C.: American Council on Education, 1974.

Garrison, Esther A. (Ed.). *Doctoral preparation for nurses.* San Francisco: University of California, 1973.

Haase, Patricia T. *A study of mastery and internality training to improve achievement in nursing curricula.* (Doctoral dissertation, Purdue University), Dissertation Abstracts International, March, 1973, 33: 4797-A.

Harms, Mary. *Development of a conceptual framework for a nursing curriculum.* Atlanta: Southern Regional Education Board, 1969.

Hoffman, Martin L., and Hoffman, Lois Wladis. Acquisition and significance of sex typing and sex role identity. In Jerome Kagan (Ed.), *Review of child development research*. New York: Russel Sage Foundation, 1964.

Kiely, William F. Follow-up: the liberation of women. In *Center Magazine* (1972), 5 (4): 19-20.

Leonard, Robert C. Developing research in a practice-oriented discipline. *American Journal of Nursing* (1967), 67: 1472-1475.

Lifton, Robert J. Woman as knower: Some psychohistorical perspectives. In Robert J. Lifton (Ed.), *The woman in America*. Boston: Beacon, 1965.

McClelland, David C. Wanted: A new self-image for women. In Robert J. Lifton (Ed.), *The woman in America*. Boston: Beacon, 1965.

MacDonald, Gwendoline. Significance of changes for the South. In *SREB Council on Collegiate Education for Nursing, Report of 18th meeting*. Atlanta: Southern Regional Education Board, 1972.

Matek, Stanley J. Some key features in the emerging context for future health policy decisions in America. Paper presented at the Conference on Redesigning Nursing Education for Public Health, Washington, D. C., May 23-25, 1973.

Mead, Margaret. Quoted in Edna Rostow, College education in today's families. *Women's Education* (1965) 4 (2).

Merton, Robert K. Status-orientations in nursing. *American Journal of Nursing* (1962), 62: 70-73.

Ozick, Cynthia. The demise of the dancing dog. In Joanne Cook, Charlotte Bunch Weeks, and Robin Morgan (Eds.), *The new woman*. Greenwich, Connecticut: Fawcett, 1970.

Rossi, Alice. Equality between the sexes: An immodest proposal. In Robert J. Lifton (Ed.), *The woman in America*. Boston: Beacon, 1965.

Rostow, Edna. College education in today's families. *Women's Education* (1965) 4 (2).

Schwartz, Eleanor. The sex barrier in business. *Atlanta Economic Review*, June, 1971.

Seidenberg, Robert. Is anatomy destiny? In Jean Baker Miller (Ed.), *Psychoanalysis and women*. Baltimore: Penguin, 1973.

Shane, Harold G. *The educational significance of the future.* Washington, D. C.: World Future Society, 1972.

Toffler, Alvin. *Future shock.* New York: Random, 1970.

Ulman, Neil. Comrade's lib. *Wall Street Journal* (1971) 7 (3): 1.

U.S. Department of Labor, Employment Standards Administration, Women's Bureau. Highlights of women's employment and education. Washington, D. C.: Government Printing Office, March, 1973.

U.S. Department of Labor, Employment Standards Administration, Women's Bureau. Women workers today. Washington, D. C.: Government Printing Office, 1971.

Wheeler, Harvey. Technology: Foundation of cultural change. *Center Magazine* (1972) 5: 48-58.

B. Higher Education

AASCU (American Association of State Colleges and Universities). *Memo to the President* (1972) 12 (4).

Bayer, Alan E. College faculties: "Le plus ca change . . ." *Change* (1974) 6 (2): 49-50, 63.

Berelson, Bernard. *Graduate education in the United States.* New York: McGraw-Hill, 1960.

Bersi, Robert M. *Restructuring the baccalaureate.* Washington, D. C.: American Association of State Colleges and Universities, 1973.

Bulpitt, Mildred. The adult student. In Dorothy M. Knoell (Ed.), *Understanding diverse students,* New Directions for Community Colleges (1973) 1 (3): 55-69.

Carnegie Commission on Higher Education. *The fourth revolution: Instructional technology in higher education.* New York: McGraw-Hill, 1972.

Carnegie Commission on Higher Education. *Less time, more options.* New York: McGraw-Hill, 1971.

Carnegie Commission on Higher Education. *New students and new places.* New York: McGraw-Hill, 1971.

Carnegie Commission on Higher Education. *Priorities for action: Final report of the Carnegie Commission on Higher Education.* New York: McGraw-Hill, 1973.

Chase, John L. *The number and kinds of earned doctor's degrees awarded by United States institutions in 1961-62.* Washington, D. C.: U.S. Department of Health, Education, & Welfare, n.d.

Chase, John L., and Breznay, Deborah B. *The number and kinds of second-level degrees conferred by United States institutions of higher education in 1963-64.* Washington, D. C.: U.S. Department of Health, Education, & Welfare, 1965.

Commission on Non-Traditional Study. *Diversity by design.* The Jossey-Bass Series in Higher Education. San Francisco: Jossey-Bass, 1973.

Council of Graduate Schools, Panel on Alternate Approaches to Graduate Education. *Scholarship for society.* Princeton: Educational Testing Service, 1973.

Cross, K. Patricia. *Beyond the open door: New students in higher education.* San Francisco: Jossey-Bass, 1971.

Diers, Donna. Application of research to nursing practice. *Image* (1972) 5: 7-11.

Dressel, Paul L., and Thompson, Mary Magdala. *College teaching: Improvement by degrees.* Iowa City: American College Testing Program, 1974.

Dunham, E. Alden. *Colleges of the forgotten Americans.* New York: McGraw-Hill, 1970.

Education Commission of the States. *Higher Education in the states.* (1973) 4 (3): 33-80.

Erickson, Edward W., *et al. Proprietary business schools and community colleges: Resource allocation, student needs, and federal policies.* Washington, D. C.: ICF, Inc., 1972.

Eurich, Alvin C. (Ed.). *Campus 1980.* New York: Delacorte, 1968.

Garrison, Esther A., *et al. Doctoral preparation for nurses . . . with emphasis on the psychiatric field.* San Francisco: University of California, 1973.

Glenny, Lyman A. The '60s in reverse. *The Research Reporter* (1973) 8 (3): 1-4.

Godwin, Winfred L. Interinstitutional and interstate cooperation in American higher education. Paper presented in Voice of America broadcast, 1972.

Goglia, Mario J. *Education and manpower in engineering.* Manpower and Education Needs in Selected Professional Fields. Atlanta: Southern Regional Education Board, 1973.

GP Newsletter ITV Field Report, Feb./Mar., 1974.

Haase, Patricia T., and Smith, Mary Howard. *Nursing education in the South—1973.* Pathways to Practice, Vol. 1. Atlanta: Southern Regional Education Board, 1974.

Hamblen, John W. *Manpower and education in selected professional fields: Computer sciences.* Manpower and Education Needs in Selected Professional Fields. Atlanta: Southern Regional Education Board, 1973.

Hamburg, Joseph. *Allied health I: A strategy for allied health education in the southern region.* Manpower and Education Needs in Selected Professional Fields. Atlanta: Southern Regional Education Board, 1973.

Heiss, Ann M. *Challenges to graduate schools: The Ph.D. program in ten universities.* Jossey-Bass Series in Higher Education. San Francisco: Jossey-Bass, 1970.

Houle, Cyril O. *The external degree.* San Francisco: Jossey-Bass, 1973.

Jencks, Christopher, and Riesman, David. *The academic revolution.* Garden City, N. Y.: Doubleday, 1968.

Kay, Evelyn R. *Directory of postsecondary schools with occupational programs, 1971: Public and private.* Washington, D. C.: Government Printing Office, 1973.

Kidd, Charles V. Graduate education: The new debate. *Change* (1974) 6 (4): 43-50.

Kintzer, Frederick C. The community college transfer student. In Dorothy M. Knoell (Ed.), *Understanding diverse students.* New Directions for Community Colleges (1973) 1 (3): 1-13.

Knoell, Dorothy M. (Ed.). *Understanding diverse students.* New Directions for Community Colleges (1973) 1 (3).

Knowles, Asa, and Associates. *Handbook of cooperative education.* San Francisco: Jossey-Bass, 1971.

Koenker, Robert H. Status of the Doctor of Arts degree. Muncie, Ind.: Graduate School, Ball State University, Nov. 1972. (Mimeographed).

Levin, Lester I. *Social work.* Manpower and Educational Needs in Selected Professional Fields. Atlanta: Southern Regional Education Board, 1973.

Lewchuck, Ross C. *National register of internships and experiential education.* Washington, D. C.: Acropolis Books, Ltd., 1973.

Lysaught, Jerome P. *From abstract into action.* New York: McGraw-Hill, 1973.

MacDonald, Gwendoline R. *Manpower and education in selected professional fields: Nursing.* Manpower and Education Needs in Selected Professional Fields. Atlanta: Southern Regional Education Board, 1973.

Martorana, S.V., and Sturtz, Alan, Jr. *The occupational student.* In Dorothy M. Knoell (Ed.), *Understanding diverse students.* New Directions for Community Colleges (1973) 1 (3): 15-33.

Mase, Darrel J. *Allied health II.* Manpower and Education Needs in Selected Professional Fields. Atlanta: Southern Regional Education Board, 1973.

Mayhew, Lewis B. *Changing practices in education for the professions.* SREB Research Monograph No. 17. Atlanta: Southern Regional Education Board, 1971.

Mayhew, Lewis B. *Reform in graduate education.* SREB Research Monograph No. 18. Atlanta: Southern Regional Education Board, 1972.

Mayhew, Lewis B., and Ford, Patrick J. *Changing the curriculum.* The Jossey-Bass Series in Higher Education. San Francisco: Jossey-Bass, 1971.

Milton, Ohmer. *Alternatives to the traditional.* San Francisco: Jossey-Bass, 1972.

Moore, Michael Grahame. Toward a theory of independent learning and teaching. *Journal of Higher Education* (1973) 44 (9): 661-679.

Moore, Raymond S. *Consortiums in American higher education: 1965-66.* Washington, D. C.: Government Printing Office, 1968.

National League for Nursing. *State-approved schools of nursing—R.N.* New York: NLN, 1973.

Newman, Frank, *et al. Report on higher education.* Washington, D. C.: Government Printing Office, 1971.

Patterson, Lewis D. *1973 consortium directory.* Washington, D. C.: American Association for Higher Education, 1973.

Polcyn, Kenneth A. Current communication satellite educational experimentation: An overview. *Audiovisual Instruction* (1973) 18 (2): 32-35.

Ricklefs, Roger. Wooing the adult student. *Change* (1974) 6 (2): 23-26.

Riesman, David. Education at Harvard. *Change* (1973) 5 (7): 24-37.

Robbins, William A. The non-traditional young adult student. In Dorothy M. Knoell (Ed.), *Understanding diverse students.* New Directions for Community Colleges (1973) 1 (3): 1-13.

Simon, Kenneth A., and Frankel, Martin M. *Projections of educational statistics to 1981-82.* Washington, D. C.: Government Printing Office, 1973.

Smith, Richard W. Televised college courses in Maryland. *Educational and Industrial Television* (1973) 5 (10): 18, 57.

Southern Regional Education Board. *The academic common market.* Atlanta: Southern Regional Education Board, 1974.

Southern Regional Education Board. *State legislation in the South affecting higher education,* 1973. Atlanta: Southern Regional Education Board, 1973.

Storr, Richard J. *The beginning of the future: A historical approach to graduate education in the arts and sciences.* Sponsored Research Studies, Carnegie Commission on Higher Education. New York: McGraw-Hill, 1973.

Study panel calls for unrestricted cable TV. *Report on Education Research* (1974) 6 (3): 2-3.

University Without Walls: A first report. Yellow Springs, Ohio: Union for Experimenting Colleges and Universities, February 1972.

Vlcek, Charles. Community-owned cable television, or, Why give the plum away? *Audiovisual Instruction* (1973) 18 (7): 20-24.

Wall, Milan. Taking education to the people: The S-U-N project. *Educational and Industrial Television* (1973) 5 (10): 15-17.

Walters, Everett (Ed.). *Graduate education today.* Washington, D. C.: American Council on Education, 1965.

Welch, Mary Scott. Is there some law that says I have to go to college this fall? *McCall's* (1973) 100 (11): 24, 27-28, 97-98.

Willard, William R. *Manpower and education in medicine.* Manpower and Education Needs in Selected Professional Fields. Atlanta: Southern Regional Education Board, 1973.

World Studies Data Bank. *Report on International Education* (1974) 2 (1): 4.

Zwicky, Laurie. The Open University at Houston. *Educational and Industrial Television* (1973) 5 (10): 19, 53.

C. The Health Care System

Bjorn, John C., and Cross, Harold D. *The problem-oriented private practice of medicine: A system for comprehensive health care.* Chicago: Modern Hospital Press, 1970.

Dubos, Rene. *Man adapting.* New Haven: Yale University Press, 1965.

Extending the scope of nursing practice: A report of the Secretary's Committee to Study Extended Roles for Nurses. DHEW Publication No. (HSM) 73-2037. Washington, D. C.: Government Printing Office, 1971.

Field, Mark G. The concept of the "health system" at the macrosociological level. *Social Science and Medicine* (1973) 7: 763-785.

Garfield, Sidney R. The delivery of medical care. *Scientific American* (April, 1970) 222 (4): 15-23.

Ginzberg, Eli (with Miriam Ostow). *Men, money, and medicine.* New York: Columbia University Press, 1969.

Hamburg, Joseph. *Allied health I. A strategy for allied health education in the southern region.* Manpower and Education Needs in Selected Professional Fields. Atlanta: Southern Regional Education Board, 1973.

Haynes, M. Alfred. Health care, technology, and the social system. In Morris F. Collen (Ed.), *Technology and health care systems in the 1980's.* DHEW Publication No. (HSM) 73-3016. Washington, D. C.: Government Printing Office, 1973. Pp. 13-18.

Health Security Act of 1973 (S. 3; H.R. 22-23). *Congressional Record*, 93rd Cong., 1st Sess. Vol. 119, no. 17.

Henderson, Virginia. The nature of nursing. *American Journal of Nursing*, August 1964.

Hodgson, Godfrey. The politics of American health care. *Atlantic*, August 1973, pp. 45-61.

Hibbard, William N., Jr. Health knowledge. In Boisfeuillet Jones (Ed.), *The Health of Americans*. Englewood Cliffs, N. J.: Prentice-Hall, 1970. Pp. 93-120.

Improving health care through research and development. Report of the Panel on Health Services Research and Development of the President's Science Advisory Committee. Washington, D. C.: Government Printing Office, March 1972.

Knowles, John H. The hospital. *Scientific American* (Sept. 1973) 229 (3): 128-137.

Lysaught, Jerome P. *An abstract for action*. National Commission for the Study of Nursing and Nursing Education. New York: McGraw-Hill, 1970.

Mase, Darrel J. *Allied health II*. Manpower and Education Needs in Selected Professional Fields. Atlanta: Southern Regional Education Board, 1973.

Matek, Stanley J. Some key features in the emerging context for future health policy decisions in America. Paper presented at the Conference on Redesigning Nursing Education for Public Health, Washington, D. C., May 23-25, 1973.

Miller, James G. A general systems approach to the patient and his environment. *Systems and medical care*. Cambridge, Mass.: MIT Press, 1972.

Pellegrino, Edmund D. The regionalization of academic medicine: The metamorphosis of a concept. *Journal of Medical Education* (Feb. 1973) 48 (2): 119-133.

Saward, Ernest W. The organization of medical care. *Scientific American* (Sept. 1973) 229 (3): 169-175.

Shane, Harold G. *The educational significance of the future*. Washington, D. C.: World Future Society, 1972.

Sisson, Daniel, comp. Social futures relating to health care delivery. *Center Report*, Feb. 1973, pp. 14-15.

Somers, Anne R. Health care and the political system: The sorcerer's apprentice revisited. In Morris F. Collen (Ed.), *Technology and health care systems in the 1980's*. DHEW Publication No. (HSM) 73-3016. Washington, D. C.: Government Printing Office, 1973. Pp. 37-45.

Towards a systematic analysis of health care in the United States. A report to Congress by the Department of Health, Education and Welfare Health Services and Mental Health Administration. DHEW Publication No. (HSM) 73-25. Washington, D. C.: Government Printing Office, October 1972.

Washington Report of Medicine and Health, Sept. 3, 1973, No. 1366.

White, Kerr L. Life and death and medicine. *Scientific American* (Sept. 1973) 229 (3): 23-33.

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